Environment Canada
Canadian Wildlife Service

Environnement Canada
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Fifty-Second Federal-Provincial/Territorial Wildlife Conference

TRANSACTIONS
1988

Victoria, British Columbia
June 14 - 17

89-03768/

DATES, S, AND THEMES FOR FEDERAL-PROVINCIAL WILDLIFE CONFERENCES

1922-1954	Ottawa, Ontario
1955	Montreal, Quebec
1956	Vancouver, British Columbia
1957	Ottawa, Ontario
1958	St. John's, Newfoundland
1959	Ottawa, Ontario
1960	Regina, Saskatchewan
1961	Ottawa, Ontario
1962	Fredericton, New Brunswick
1963	Ottawa, Ontario
1964	Charlottetown, Prince Edward Island
1965	Winnipeg, Manitoba
1966	Quebec, Quebec
1967	Ottawa, Ontario
1968	Whitehorse, Yukon Territory
1969	Edmonton, Alberta
1970	Yellowknife, Northwest Territories
1971	Toronto, Ontario
1972	Dartmouth, Nova Scotia
1973	Ottawa, Ontario
1974	Victoria, British Columbia (People and wildlife)
1975	St. John's, Newfoundland (Wildlife values)
1976	Fredericton, New Brunswick (Federal-provincial initiatives in wildlife management)
1977	Winnipeg, Manitoba (Wildlife enforcement in Canada)
1978	Quebec, Quebec (Use of wildlife)
1979	Regina, Saskatchewan (Habitat is the key)
1980	Ottawa, Ontario (A national policy on wildlife)
1981	Charlottetown, Prince Edward Island (A national policy on wildlife - Phase II)
1982	Whitehorse, Yukon Territory (Wildlife in Canada's North)
1983	Edmonton, Alberta (Wildlife management - Today and tomorrow)
1984	Timmins, Ontario (Team-work in wildlife management)
1985	Halifax, Nova Scotia (Communicating about wildlife)
1986	Ottawa, Ontario (Canada's role in world wildlife conservation)
1987	Tuktoyaktuk, Northwest Territories (Wildlife: Agenda for tomorrow)
1988	Victoria, British Columbia (Is the current direction of wildlife management in Canada outdated?)
1989	St. John's, Newfoundland
1990	Winnipeg, Manitoba
1991	Fredericton, New Brunswick

Transactions of the
Fifty-second Federal-Provincial/Territorial Wildlife Conference
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14-17 June
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Summary of the 52nd Federal-Provincial Wildlife Conference

1. Conference opening

Jim Walker, Director, Wildlife Branch, BC Ministry of Environment and Parks, chaired the 52nd Federal-Provincial Wildlife Conference held in Victoria, British Columbia, from 14 to 17 June 1988. He introduced the theme, "Is the current direction of wildlife management in Canada outdated?" He expressed the hope that the new format would improve the Conference, the results from it, and, in particular, the participants' enjoyment of it. He felt that the design of the Conference combined the best of timely debate, some introspection for the governments and non-government wildlife agencies, and a social program second to none.

Mr. Walker introduced his Minister, the Honourable Bruce Strachan. Mr. Strachan welcomed everyone to British Columbia. He gave a few examples of how current activities of the Ministry of Environment and Parks are aimed at bringing about a successful marriage between wildlife conservation, habitat protection, and sustainable development. He thanked delegates for their contribution and dedication to Canadian wildlife.

Her Worship Gretchen Brewin, Mayor of Victoria, was then introduced by Jim Walker. She welcomed the Conference to Victoria. She offered her support to the BC government for the effort it has made in the area of wildlife management, explaining that she and her colleagues are not directly involved at the municipal level. She felt, though, that everyone has a responsibility to understand what is happening in wildlife management. She said that we are stewards of this planet, and if we do not look after our wildlife we will have nothing to sustain us.

2. Objectives of the Conference and new format

Mr. Walker explained a few changes that were made to the Conference this year. He then introduced the federal/provincial/territorial Wildlife Directors and the Deputy Minister for Environment Canada, Madame Geneviève Ste. Marie.

3. Keynote speech--Monte Hummel, World Wildlife Fund Canada ("Are wildlife management agencies giving the public what it wants?")

Monte Hummel, President, World Wildlife Fund Canada, stated that "Canadians care deeply about their environment. They also care deeply about wildlife as part of that environment. And anyone--politician, economist, educator, businessman, civil servant, or conservationist--who ignores this message does so at his peril." He added that the environment has become good politics in Canada.

Mr. Hummel's opinion was that the public would be absolutely outraged to see how financially strapped wildlife agencies are. He said that this lack of budgetary commitment in the face of overwhelming public political support causes him to ask, "Who's listening to the public?" He felt that the quality of government's response is the basis of problems between government wildlife agencies and the public. He suggested that government agencies should give the public honest information that is clear, accurate, and respects their intelligence; give the public a balanced set of programs that truly reflects public priorities; and spend very scarce dollars accordingly. He pointed out that a concerned, interested public is our greatest friend.

Mr. Hummel said that what people want from non-government organizations (NGOs) is courtesy and respect as donors, accountability, co-operation, and results. The public also expects efficiency in the form of low fundraising and administration costs, professionally managed staffs that draw heavily on volunteers and donated services, and good leverage for the dollars the public donates. He concluded that ultimately we will save wildlife only by saving habitat.

4. Session 1: "Setting the stage"

John Baird, Director, Fish, Wildlife and Recreation Policy, New Brunswick Department of Natural Resources and Energy, chaired this session. He introduced the speakers and led the discussion period.

Rich Goulden, Assistant Deputy Minister, Manitoba Department of Natural Resources, addressed the Conference on "What wildlife agencies are doing to meet the changing wants and needs in Canadian society." Mr. Goulden warned that wildlife managers should "watch out for and measure changes in your client base and their changing preferences. If you don't respond to their needs, someone else will, and your agency could be relegated to the backwaters of program funding."

Roy Moses from Old Crow, Yukon Territory, spoke on the "Primary use of wildlife." Mr. Moses pointed out that the consumptive use of wildlife as food in northern Canada is paramount. He also said that the importance of wildlife to native cultures cannot be overstated, and that, in fact, native cultures are little more than a rich collection of traditions based on the consumptive uses of wildlife.

Jon Gilstrom, Planning Co-ordinator, Washington Department of Wildlife, analyzed the declining demand for consumptive use of wildlife. He listed some of the causes for decline in hunters, as follows:

Long term

- loss of habitat
- loss of access
- longer distances to travel
- declining hunting quality
- changing social and cultural values, lifestyles, family structures
- competition for time and money
- fear of guns
- aging population, baby boomers
- major shifts in economic structure, loss of rural jobs
- increasing complexity of management/regulations

Short term (since 1980)

- recession
- price increase during recession
- bad winters, reduced Chukar, pheasant, quail populations
- restricted deer and elk seasons, reduced either-sex permits
- area stratification
- reduced waterfowl populations, bag limits, and seasons

Fern Filion presented a report on measuring the demand for non-hunting uses of wildlife. He addressed the topic by raising several questions about non-hunting uses and concluded by commenting on potential management implications stemming from their answers.

5. Report from Canadian Wildlife Directors' meeting

Jim Walker chaired the Canadian Wildlife Directors' meeting and reported to the Federal-Provincial Wildlife Conference on action taken on recommendations. His report is included in the transactions.

6. Session 2: "Is current wildlife management relevant?"

H.A. (Tony) Clarke, Director General, Canadian Wildlife Service, introduced the panel session. He felt that the discussions between people with differing points of view would prove stimulating. He introduced the panel members and led the discussion periods.

Michael O'Sullivan, Field Representative, World Society for the Protection of Animals, spoke to the Conference on "Non-use of wildlife," under the broader topic of "How do we factor in the full range of uses of wildlife?" Mr. O'Sullivan stated that, in his view, the fundamental concept of current wildlife management programs is that wildlife exists to be exploited by people. His complete report can be found in the transactions.

Dr. Robert Hudson, Professor, Department of Animal Science, University of Alberta, looked at the same topic from the viewpoint of "commercialization of wildlife." He said that one of our most important achievements is that public ownership provides equal and free access to wildlife. He pointed out that whether or not this can be considered fair depends on whether the contributions of individual citizens are equal. He stated that this turns out to be a self-fulfilling prophesy: not only are equal contributions assumed, they are guaranteed to be equal and (unfortunately) just a guilt's width from zero.

Dr. Martin Edwards, Professor of Physics, Royal Military College of Canada, and Mr. Corky Peterson, Education Co-ordinator, Manitoba Registered Trappers' Association, addressed the question, "Is there too much emphasis on consumptive use of wildlife?" Dr. Edwards spoke in support of the non-consumptive use of wildlife. He contended that the current direction of wildlife management in Canada is out of date, out of balance, and sexist. He said that it is clear that the dramatic growth of interest in non-consumptive uses of wildlife has occurred without the full support or leadership of most wildlife managers. He stated that it is time to allocate a larger fraction of current resources to non-consumptive uses of wildlife. He added that more money and people are needed, but we cannot wait for the new money to act. He concluded that it was important to start redistributing staff and resources now!

Mr. Peterson supported the consumptive use of wildlife. He spoke of his life as a trapper in northern Manitoba. He said that wildlife is something that cannot be stockpiled--if you do not use it, you lose it! He pointed out that the time has come for all of us to recognize the devastating effect of decisions being made on a purely emotional basis regarding the use of various wildlife species.

Dr. Val Geist, Professor, Faculty of Environmental Design, University of Calgary, reported on "Flourishing public wildlife: the commons controlled." Dr. Geist said that the destruction of wildlife before World War I was almost beyond belief. He said that, in his view, the first day of wildlife management in North America was 17 August 1886, when Captain Moses Harris rode with his troops into Mammoth Hotspring and took over the management of Yellowstone National Park. He continued with the history of wildlife management to the present day.

Mr. Garnet Anthony, CBC Radio, Edmonton, spoke on "Does public perception reflect these realities--are they getting accurate information?" Mr. Anthony said that we were not getting our message to the public. He asked: "If you don't tell the story, who is going to tell it?" He stated that there is one basic rule in broadcasting if you want to communicate: it is called the "Kiss" principle--"Keep it simple, stupid." He said that our message has to be very simple and to the point. He reiterated that it is necessary to keep our message ongoing.

7. Session 3: "Future wildlife management direction"

The chairman for Session 3 was Don Robinson, Director, BC Wildlife Federation. Mr. Robinson introduced the panel topic. He said that most wildlife species throughout Canada and indeed North America will succeed or fail based on their ability to adjust, with man's help, to mining, logging, farming, ranching, urbanization, industrialization, settlement, etc. He introduced the speakers and led the discussion period.

Arthur Hoole, Director, Manitoba Wildlife Branch, presented a paper on "Why we must manage wildlife." Mr. Hoole stated that wildlife management might most simply be thought of as the deliberate consideration of wildlife and the taking of decisions or actions to influence productivity or numbers. He suggested that there were at least three prevailing imperatives for managing wildlife:

(1) An ethics imperative: wildlife must be managed because our humanity compels us to contemplate other life, develop and organize knowledge about it, and then apply that knowledge to help sustain it.

(2) An environmental imperative: wildlife must be managed as part of maintaining ecological processes and genetic diversity; integration of environment and economy demands new directions in wildlife management within strategies for conservation.

(3) A benefits imperative: current management practice has probably limited the realization of the full economic and social benefits available from wildlife.

Mr. Hoole concluded that "We must manage wildlife because it is ethically responsible, an environmental necessity, and ultimately in our own self-interest."

Dr. James Hatter, former Director, BC Wildlife Branch, gave his opinion on "Intensive wildlife management by government agencies and the private sector." Dr. Hatter believes that when the private sector is encouraged and allowed to practise game ranching, there will be incentives to demonstrate the full range of intensive, integrated use of land for ungulate game and other wildlife, along with forestry and agricultural interests. Dr. Hatter said that current wildlife management in Canada tends to be somewhat misleading or confusing.

Hugh Monaghan, Director, Yukon Fish and Wildlife Branch, rebutted Dr. Hatter's paper. He stated that his role was to advance a view that would differ from Dr. Hatter's. He said that his view on the future of wildlife management in Canada does not oppose Dr. Hatter's; rather, he believes our future requires the provision of a pluralistic system of wildlife management to meet a range of needs for Canadians while recognizing our obligations to future generations of Canadians and others for healthy ecosystems. His report is included in the transactions.

Paul Griss, Executive Director, Canadian Nature Federation, considered the question, "Are wildlife preservation areas really an option?" Mr. Griss supported the positive side of the question. He stated that he believes that without greater emphasis and action on preservation in the next decade, much of our wildlife and wilderness will not have a future in Canada, only a past. He said that the public wants wilderness preservation.

The negative position was taken by Greg Jones, Wildlife Biologist, BC Parks Branch. Mr. Jones said that just creating a protected area does not always guarantee preservation of the wildlife. The basic problem is that it is usually impossible to protect an area from all human influences. He pointed out that as long as hunting and other wildlife can be controlled, their food maintained, and a diverse habitat provided, it should be possible to protect wildlife in most regions without reserves.

"The impact of tourism" was discussed by Gary Runka, Consultant, Land Sense Limited. Mr. Runka advised that wildlife managers had better become interested in the impact tourism has on wildlife. He said that there are three priorities related to tourism and wildlife management:

- understanding demand;

- the general use and management approach; and

- site and local management considerations.

8. Banquet festivities

The 15 June banquet festivities were opened by the Honourable Dave Parker, Minister of Forests, British Columbia. Jim Walker introduced the head table. Dr. Louis Lemieux, President, Canadian Wildlife Federation, said grace. Tony Clarke, Director General, Canadian Wildlife Service, introduced the banquet speaker, Mr. Ian McKinnon, President, Decima Research Limited.

Mr. McKinnon asked the question: "If everyone is in favour of the environment, why don't we have the political support and clout that we know we need?" He discussed Canadian attitudes about the environment and gave his view on how Canadians look at issues both related to wildlife and within a larger environmental context. He said that wildlife agencies do not get enough support because people do not see wildlife as an environmental issue. He stated that wildlife managers have a very straightforward but difficult task ahead of them to bring wildlife issues to the political arena and put them on the public policy agenda. Wildlife managers have to ensure that the Canadian public sees wildlife protection and management as part of their image of what makes Canada different and unique, and what they (Canadians) can be proud of in this country.

Doug Pollock, Secretary, Federal-Provincial Wildlife Conference, thanked Mr. McKinnon for his stimulating address and expressed the hope that wildlife agencies would be able to respond to his challenge.

9. Workshops

In giving direction to the teams reviewing Guidelines for a Wildlife Policy in Canada, Jim Walker suggested that the following points might be considered during the workshops:

(1) What has been left out of the first edition of the guidelines?

(2) What have you heard at this Conference that would make you feel that the guidelines should take a different approach, maybe even an opposite philosophy or opposite principles?

Mr. Walker said that he had heard a lot of things that made him think that the guidelines needed to be looked at closely. He gave a few quotes to emphasize this point:

(1) "The wildlife public is simply an audience to be pleased."

(2) "Wildlife agencies are largely stagnant, with little innovation or diversity" (R. Hudson).

(3) "After a lack of awareness, one of the biggest problems facing wildlife is the policy of the agencies themselves that give advice to politicians" (M. O'Sullivan).

Mr. Walker asked whether we can achieve any kind of consensus or priority on what the major changes should be, and what issues, principles, or even questions of ethics were not mentioned at the Conference that should be.

(a) Workshop 1 (Paul Griss)

Workshop 1 participants examined missing concepts in the guidelines, or concepts where more emphasis is required. These were:

- value systems;
- management and research;
- responsibility for wildlife and application of the guidelines; and
- public awareness.

Participants also suggested some implementation options.

(b) Workshop 2 (J.A. Keith)

Workshop 2 participants felt that the guidelines must have formal adoption by governments, not just wildlife ministers.

The guidelines should be a policy document, written in a more aggressive, action-oriented manner. The team members suggested that there should be a performance audit every five years. They also discussed:

- format and distribution;
- content;
- goals; and
- action.

(c) Workshop 3 (Jim Inder/Art Martell)

Jim Inder mentioned that, in general, there needs to be more input by the public at an early stage in terms of developing the guidelines and implementation procedures. Also, the guidelines need to be more aggressive. Mr. Inder listed some problems and then turned the podium over to Dr. Martell. Art Martell said that most of the workshop was spent discussing the general concept, as well as goals, guiding principles, and element actions.

(d) Workshop 4 (Dave Pike)

Workshop 4 members arranged their comments under three headings:

- current guidelines;
- suggestions for updating; and
- observations not directly related to guidelines but that should also be considered.

Mr. Pike said that there was a general consensus that the guidelines as written are still basically relevant today, but there must be action taken to make the guidelines more proactive.

10. Conference wrap-up

Dr. Andrew Thompson, Associate Counsel, Ferguson Gifford Barristers and Solicitors, undertook the difficult task of summarizing the Conference. He warned that if we do not produce the kind of document (guidelines) that shows a more aggressive stance, we will lose the support of the NGOs. He said that this is not the time to be less aggressive; we should not stand with the status quo, but need to take the initiative to get more money and to have a more aggressive stance against other users, because there is a public out there to support wildlife. He suggested that the NGOs should be more co-ordinated in their activities. He concluded that this is a time, more than ever, to put our strengths, our resources, and our talents behind wildlife preservation and all the ways we enjoy the wilderness.

11. Program Committee members--1989

The Program Committee membership for 1989 is as follows: David Pike, Newfoundland (Chairman); Douglas Pollock, Canadian Wildlife Service (Secretary); George Finney, Canadian Wildlife Service, Atlantic Region; Arthur Hoole, Manitoba; Bob Andrews, Alberta; Paul Griss, Canadian Nature Federation; David Neave, Wildlife Habitat Canada; Stewart Morrison, Ducks Unlimited Canada; and local NGOs invited by Newfoundland.

12. Invitation to 1989 Conference

David Pike, Director, Newfoundland Wildlife Division, invited everyone to attend the 53rd Conference in St. John's, Newfoundland, 20-23 June 1989. The Conference will be held in the Radisson Convention Centre located in downtown St. John's.

13. Choice of theme for National Wildlife Week 1989

The "Wildlife Habitat Classroom Fund" proposal submitted by the Canadian Wildlife Federation was accepted as the concept for National Wildlife Week 1989, with the qualification that different wording be found to reflect the fact that this concept encourages students to undertake wildlife projects supported by the fund and that emphasis was on "hands-on" wildlife projects. Further information on National Wildlife Week can be found in Jim Walker's report to the Conference from the Canadian Wildlife Directors' meeting.

14. Choice of Conference theme, 1989

To date, a theme has not been chosen for 1989.

15. Attendance

There were 249 registered participants at this year's Conference.

16. Conference closing

Jim Walker thanked the BC Wildlife Federation, Foundation for North American Wild Sheep, Guide Outfitters' Association of British Columbia, and the Nature Trust for their contributions to the Conference, both for the number of people attending and financially. He thanked the Program Committee for all its hard work. A special thank-you was extended to Doug Pollock and Sylvia Normand for their efforts and advice. He thanked his own staff and the staff of the Parks Branch of the Ministry of Environment and Parks for making the Conference a success. He gave special thanks to Nancy Wilkins, Linda Foubister, Linda Adams, Bob Hall, Don Eastman, and Laura Friis. He thanked all speakers and people attending for coming to the Conference, entering into the debate, and making it interesting and diverse. His closing comment was: "This Conference was set up as a debate between many opposing views on the use of wildlife. In the grand scheme of things, it really doesn't matter who wins this debate about the use of wildlife if we still have healthy populations of wildlife around. I won't be too upset if we are still having this debate in 10 years, as long as we still have enough wildlife so that the debate is relevant. If that happens, we all will have won." He then adjourned the Conference.

17. Dates of subsequent conferences

1989	20-23 June	St. John's, Newfoundland
1990	19-22 June	Winnipeg, Manitoba
1991	18-21 June	Fredericton, New Brunswick

Welcoming addresses (1)

Honourable Bruce Strachan
Minister of Environment and Parks
Government of British Columbia

On behalf of the Government of British Columbia I'd like to offer a sincere welcome to all of you, particularly those of you who are from outside our borders. I'd also like to extend cordial greetings from the Premier, who was unable to attend the Conference today.

For those of you from outside the province, I want to acknowledge two very significant people who have contributed much to wildlife and to a better understanding of the resource in our province. The first is Bert Hoffmeister, who is a significant and remarkable character in the recognition of the resource. The second is Stu Reeder, the President of the BC Wildlife Federation, who is a great resource to me and to the Ministry and one whose counsel I take wisely.

I'm honoured to have this opportunity to welcome you to the 52nd annual Federal-Provincial Wildlife Conference. This Conference has become an important forum for the exchange of ideas in wildlife management practices and for making recommendations for change. Over the years it has helped shape management policy in several areas, including wildlife enforcement, wildlife in Canada's North, and this country's role in world wildlife conservation. This year's theme, "Is the current direction of wildlife management in Canada outdated?," is particularly appropriate here in British Columbia, where we have the greatest diversity and abundance of wildlife in Canada. (In fact, the province is home to 75% of the world's stone sheep, 65% of the world's California bighorn sheep, 60% of all mountain goats, half of the world's Trumpeter Swans, and a quarter of the world's grizzly bears.) We may also have the most conflict, at least over resource issues.

We in British Columbia are justifiably proud of the intrinsic value of this plentiful resource and are no strangers to debate about wildlife use and management. We are especially interested in any attempt to reach consensus on wildlife use, management, and allocation.

I want to spend the next few moments giving you some perspective concerning wildlife management in British Columbia and how it fits into the whole question of resource use and development. We take the view that it is impossible to consider any aspect of environmental protection and conservation, including wildlife management, in isolation. In this province, the interdependence of economic development and natural resources means that environmental concerns must be addressed in economic development, and economic concerns must be part of environmental planning and management. To put it simply, a sustainable environment is not possible without a sustainable economy, and a sustainable economy is not possible without a sustainable, high-quality environment.

I'd like to give you some examples of how we translate this policy into a specific initiative concerning wildlife management. The timberland of the Khutzeymateen watershed in the province's interior in the Prince Rupert area is habitat for one of Canada's healthiest populations of grizzly bears and at the same time is a valuable resource for our forest industry. The Ministry of Environment and Parks, along with the Ministry of Forests and Lands, has initiated a three-year study to determine what impact forest activity in the area would have on grizzly bear habitat. This assessment will be a major factor in deciding whether we allow logging in the Khutzeymateen--to not log is a real option. We intend to invite appropriate experts to comment on our study design in order to ensure the most credible program possible.

Two of the field trips scheduled for Friday will give you an opportunity to see first-hand how we in British Columbia support widely varied use of wildlife. The first is Botanical Beach, a truly exceptional intertidal pool area first identified at about the turn of the century. We recently purchased the adjacent land to protect it from logging and to preserve it for the use of naturalists and the general public. The other field trip is to Sidney Island, where we have issued one of the first game farming permits to allow the sale of fallow deer as part of our current trial development of a commercial game farming industry.

Public enjoyment of wildlife areas like Botanical Beach is another illustration of the link that exists between a sustainable wildlife resource and a sustainable economic benefit. In fact, non-hunting use of wildlife now generates a half billion dollars a year in British Columbia. When combined with the revenues from consumptive uses, such as hunting, fishing, and trapping, the result is substantial economic benefit throughout the entire province. To encourage this use of wildlife, the Ministry of Environment and Parks is proceeding with the wildlife viewing program. Working in co-operation with the Ministry of Tourism, Recreation and Culture and the federal government, we have identified over 300 potential viewing sites, 51 of which have been identified in British Columbia as areas that should be developed over the next few years in order to add to wildlife management an important new opportunity for public enjoyment.

This morning I've given you a few examples of how our current Ministry activities are aimed at bringing about a successful marriage between wildlife conservation, habitat protection, and sustainable development. In your review of wildlife management practices over these next few days, I encourage you to think in similar terms: to see our wildlife resource not as an isolated entity, to be managed for its own sake, but as an integral part of the whole. In this context, the challenge facing contemporary managers is to ensure sustainability of our wildlife resource, while at the same time making the correct ethical and social decisions about its future use.

In closing, I extend my very best wishes to you, and I thank you for your contribution and dedication to Canadian wildlife.

Welcoming addresses (2)

Her Worship Gretchen Brewin
Mayor of Victoria

It is my pleasure to be here to hear the Minister and to welcome all of you to the City of Victoria. I wish you every success with the agenda that you have set for yourselves. I would like to offer my support to the government for the effort that it has made so far in the area of wildlife management. It is a major task for government, as those of you in the federal and provincial governments know only too well. Those of us at the municipal level are not directly involved, in that we don't have any wildlife reserves in our areas of jurisdiction. Nonetheless, I think we all have a responsibility--not just the community of Victoria, but all the citizens of our country--to understand what is happening in wildlife and wildlife management and to appreciate the kind of balance that the Minister acknowledged earlier.

This book, titled "Our Common Future," was a study undertaken for the United Nations and chaired by Mrs. Gro Harlem Brundtland, who is the Prime Minister of Norway. Many questions that are on your agenda, involving the environment and wildlife and the balance of nature that we have to maintain, are in this report. I know that there are costs attached to dealing with these kinds of issues, but we are stewards of this planet, and if we don't pay attention to them now, then we are going to lose major resources in our communities, and we will have nothing left to sustain us.

What is also important, I think, is to recognize the need for debate. The debate must be open, non-defensive, and in the public sector, so that the community at large can begin to understand better what it is that we are all trying to do here and why we are trying to do it. I think it's a difficult job for governments these days, with the kinds of pressures that are on them already to try to sustain our economic levels. Those pressures result in pressure on the environment, as we have seen with the fights between pipelines and caribou in the North, and between large electrical dams and some spectacular natural valleys. We have to sort out all of these things. The debate must continue with intelligence, energy, and mutual understanding.

I am really delighted that all of you are here. I hope that in the natural environment of Victoria you will find opportunities to help all of us in the community understand what you are doing and how important it is to our basic survival.

New format and objectives of Conference

Jim Walker
Director
BC Wildlife Branch

Explanation of new format

The Federal-Provincial Wildlife Conference is a bit different this year, and I want to tell you about some of the changes made.

Participation of NGOs

This Conference had its genesis years ago in an annual meeting of wildlife agencies from across Canada to discuss regulation changes, specifically with respect to waterfowl seasons. Although it was set up as a vehicle largely for the exchange of information and ideas between government agencies, non-government agencies were eventually included with the status of invited guests, but they did not actually fully participate in the discussions or in any of the voting that took place.

For the last several years, there has been some dissatisfaction expressed, both in government and in the public sector, with this format, which was seen by many people as a bit of an anachronism. Many felt that there should be a forum for the exchange of ideas between government and the major environmental groups and that these latter organizations should have more of an opportunity to influence government policy and position as they relate to wildlife. Accordingly, the role of the non-government organizations (NGOs) has gradually assumed more profile in this Conference, and this year we've tried to structure the Federal-Provincial Wildlife Conference as a real and meaningful opportunity for the public and, especially, organized wildlife groups to influence government policy.

Presentation and disposition of recommendations

We have made some other changes this year. In the past, we had a session called the "Recommendations Session" on the last afternoon of the Conference at which recommendations could be put to the Conference by the public or by government agencies. They would then be voted on by directors. We found that this became a singularly unproductive exercise, as it was usually rushed, with insufficient time for debate. More importantly, sometimes a recommendation would come from one province, be approved by the directors, and then be sent back to that province for implementation. We felt that this was not the most productive route for handling the public's input, so we decided to try a slightly different format.

This year, we notified various wildlife groups in advance of this Conference that recommendations could be presented, either in person or through written copy, at the beginning of the Canadian Wildlife Directors' meeting, which immediately preceded this Conference. The recommendations received were debated and discussed by the Canadian

Wildlife Directors in their two-day meeting. There will be a report back to the Conference on the disposition of each of the 10 recommendations that we received. We felt that this would ensure that adequate time was spent on good recommendations. We will be visibly accountable for telling this Conference what we plan to do with each recommendation. We are not convinced that this is the best way to handle recommendations, but we are committed to finding a more productive route and will be working to improve this aspect of the annual Conference so that you, the public, feel you have an open and meaningful way to influence wildlife policy.

Other changes

People who have been to other Federal-Provincial Wildlife Conferences will notice that we have dispensed with the former arrangement of a series of head tables for the representatives of the various wildlife agencies, and we've set the Conference up on a more informal basis. This is an attempt to give all of you more of an equal feeling of participation, rather than an attempt, on our part, to hide the directors away from people who might want to ask them questions about specific provincial policies. To show you that we still wish to encourage that exchange, I'm going to ask each director, as I name him, to stand to be identified so that you will know to whom to address your questions. (An introduction of federal/provincial/territorial Wildlife Directors was made.)

As well, we have dispensed with a lot of the traditional trappings of this Federal-Provincial Wildlife Conference, including name plaques for the directors and provincial flags over the directors' tables, in an attempt to loosen the Conference up a bit.

Objectives of Conference

Revision of the Guidelines for a Wildlife Policy in Canada

This year's Conference is built around the revision of the Guidelines for a Wildlife Policy in Canada. This document was developed between 1980 and 1982, ratified by Wildlife Ministers across Canada on 30 September 1982, and published in 1983. It is now time to have a look at it again.

The purpose of our Conference, then, is to review these guidelines in the light of changing perceptions of wildlife and wildlife management and to recommend, if necessary, changes that can be incorporated into a future edition of these guidelines. It will then be ratified again by the Wildlife Ministers across the country.

We wish to accomplish a number of tasks at this Conference, both on this floor and in the individual workshops. First of all, we want to review the origin, intent, and success of these guidelines in an initial workshop this afternoon. It is important that you have some measure of and appreciation for the degree to which these guidelines have influenced wildlife policy in this country. That will come out in the first workshop. Then, over the next few days we want you to hear from a variety of speakers about what wildlife agencies are doing across this country; how perceptions of public attitudes about wildlife have changed; what those changes are; and what some of the future predictions for wildlife management are.

On the basis of all these discussions, the second workshop will concentrate on making recommendations for the revision of the guidelines, if you think they are necessary. I want to emphasize that we are not attempting to reword or rewrite these guidelines at this Conference, but to make recommendations on what should be changed, what should be deleted, and what should be added on. The actual revisions will be done by a team of representatives of federal and provincial governments and national NGOs interested in wildlife. Once these revisions are drafted, we will once again be seeking comment from you on the wording, but this week we want you to concentrate on providing principal and major direction, not on wording.

Of course, we have our work cut out for us as government wildlife managers. First of all, we have to convince you that the Guidelines for a Wildlife Policy in Canada was an important publication in the evolution of wildlife management in Canada and that what is in the publication has been applied across the country and does serve as a guideline for wildlife agencies. Accordingly, some of the workshops are to try to evaluate the success of the guidelines. After you hear what has been accomplished across the country and how well it fits into these general guidelines, you can make up your own minds.

We think we have formulated this Conference to be more than just a pleasant exchange of technical ideas and papers and a good social gathering. Our intended revision of the Guidelines for a Wildlife Policy in Canada is a challenging task, and the direction that this revision takes will be, in large measure, determined by the tone that you set for this Conference.

Finding correct management direction

We realize that we have a "broad brush" Conference this year, and that is intentional. If you look at the agenda, each one of the individual panels or subjects could probably be the basis of a conference itself, but we decided that we did not want the definitive, technical treatment of one specific subject but rather some philosophical ideas on how the major wildlife organizations are thinking about wildlife, what we are doing to wildlife on their behalf, and how this should, in turn, influence our future thinking. We expect this Conference to be light on technical matters but heavy on introspection and, we hope, philosophy. I hope we have not been too optimistic.

As a director of a wildlife management program myself, I realize that the winds of change are blowing. That is why we have opened up this Conference. We hope to make it something more than an annual meeting of the "Old Boys' Club." As our Minister said, this province and my wildlife programs are no strangers to the controversy that surrounds traditional wildlife management. We are fortunate here in British Columbia that we still have options left to make a debate about wolves, grizzly bears, or Peregrine Falcons meaningful. But, like every wildlife management agency across this country, we are feeling more and more pressure from those who want new attitudes toward wildlife incorporated into our wildlife goals and objectives. They want programs broadened to appeal to a wider public. On the national and the international stages, we have new questions posed almost every day relating to wildlife. Do we log or do we not log? Do we mine or do we not mine when there is wildlife around? Do we hunt or do we not hunt? Do we trap or do we stop trapping? Do we manage or do we leave them alone? Do we control predators or do we leave them alone? Do we domesticate wild animals or do we leave them out in the wild?

On each of these questions we face dilemmas every day. Our decisions place us in one of two camps with respect to the groups who look at the wildlife management agencies. We can be reviled by one side as killers, or castigated by the other side as ineffective managers. I can speak for the Province of British Columbia, and I think I can probably speak for my colleagues right across this country in wildlife management, when I say that we are not intractably committed to any side in this debate. We are committed to finding the correct management direction in a field where it is becoming increasingly difficult for us to determine what the public wants, and especially if the public even has the right information to know what it wants. As wildlife directors, we are not looking for "a blinding light on the road to Damascus," after which the way to manage wildlife will become suddenly clear to everyone. We are looking to get a better idea of what you, the public groups interested in wildlife, want us to do with your resource. That is what this Conference is all about!

Keynote speech (1)

ARE WILDLIFE MANAGEMENT AGENCIES GIVING THE PUBLIC WHAT IT WANTS?

Monte Hummel
President
World Wildlife Fund Canada

In addressing the question, "Are wildlife management agencies giving the public what it wants?," I've divided my talk into two major sections. First, to the best of our knowledge, what does the Canadian public want when it comes to wildlife conservation? Second, if we have an idea of what it wants, how well are wildlife agencies, both government and non-government, responding?

What does the Canadian public want?

First, then, when it comes to conservation, what does the Canadian public want? The most direct and obvious way to find out what the people want is to ask them. So we did. The World Wildlife Fund (WWF) had a unique opportunity last week to get a couple of free questions on a national Gallup Poll (see Appendix A), an omnibus poll, for which we are most grateful. I tried as closely as possible to pose publicly through the poll the same question put to me by the Conference organizers. Now I'd like to release the results.

The two questions were prefaced with the following statement: "Federal, provincial, and territorial wildlife agencies currently administer programs that regulate such activities as hunting, trapping, and fishing. These agencies also run programs which advance such activities as wildlife viewing and protecting endangered species."

Satisfaction with agencies' response to public concerns

The first question was: "In your opinion, how satisfied are you with current government wildlife agencies' response to your concerns about wildlife in Canada?" The response was as follows, and I admit the results surprised me:

Very satisfied	13%
Somewhat satisfied	50%
Not very satisfied	15%
Not at all satisfied	8%
Don't know or care	14%
	100%

Now before those of you from government almost break your arms patting yourselves on the back, let me tell you how the Gallup people interpret this information. This is what they call a "top of the mind" question, which gives you a general baseline of public opinion, unrelated to any specific issue. Gallup suggests, and I agree, that there is currently very strong support for environment and wildlife in general in Canada; therefore, people who may not be particularly well informed about wildlife agencies but nevertheless like wildlife would be reluctant to express dissatisfaction with this part of government (as opposed to Revenue Canada, for example). The 50% in the "somewhat satisfied" category probably reflects, Gallup suggests, this generally sympathetic but relatively uninformed portion of the population. It represents a kind of neutral vote. The more informed opinion, I'm told, is likely to be in the "very satisfied" or in the two dissatisfied categories, because these people have some specific reason for departing from the norm. In this regard, 13% were very satisfied, and 23% were dissatisfied. You may want to keep this in mind when looking at that rather impressive 63% who are either somewhat or very satisfied with wildlife agencies. Actually, I think this question may be somewhat inconclusive and puzzling. Rather than resolving the whole question at the top of the Conference, it gives us an indication that it is a good topic for discussion.

Types of activities that should be given top priority

Things get more interesting if we can probe public opinion about a specific issue. Therefore, our second question, once again following the Conference theme, was: "For you personally, which types of activities should be given top priority, the programs relating to hunting, trapping, and fishing, or programs to enhance wildlife viewing and protecting endangered species?"

The response was:

Hunting, trapping, and fishing	16%
Wildlife viewing and protecting endangered species	60%
Both are equally important (volunteered)	19%
Don't know or care	5%
	100%

Because they are derived from a specific question, these results are more statistically significant than those from the first question. They are also less surprising, at least to me, because they support a general trend in keeping with the 1981 Statistics Canada survey on the importance of wildlife to Canadians. That survey, you will recall, showed that 84% of Canadians participate in wildlife-related activities. It also showed that less than 10% are hunters, whereas 67% participate in non-consumptive activities, and 82% expressed concern about saving endangered species. In this case, we have included hunting, trapping, and fishing in our question about consumption uses, and I think that is why the percentage has gone up a bit on the consumptive side in relation to the 1981 survey. Therefore, WWF's Gallup Poll only continues to hammer home the overwhelming majority interest in non-consumptive uses of wildlife in Canada.

Environment as a political issue

But this wildlife information is only the caboose of an enormous political freight train tearing across the country right now. I'm referring to the astounding concern being expressed by Canadians for the environment in general, to the point where it has become one of the top social and political issues in the country, rivalling Meech Lake, free trade, unemployment, and literally all economic concerns. As conservationists, we have never been in such a position of strength, and you might want to think seriously about whether we ever will be again.

Every major poll--e.g., Gallup, Crop, Decima, Environics--documents this fact. For example, 95% of Canadians approve of government expenditures for wilderness preservation; 93% say we shouldn't relax environmental laws to achieve economic growth; 88% say protecting the environment is more important than keeping prices down; 87% are upset about the lack of action taken to protect the environment; 70% say we should do more to protect the environment even if it means jobs must be lost in the process; and, more importantly, 70% believe that, in fact, major spending on the environment will have a positive effect on the economy.

Now you may quibble with the wording of particular questions, you may ask about what constitutes a significant sample and about rural versus urban splits and north versus south, or you may even question the value of polls themselves. But you would have to be downright stupid not to get the overall message. It's crystal clear, and it's not going to be changed by technical quibbling. *Canadians care deeply about their environment. They also care deeply about wildlife as part of that environment*. And anyone--politician, economist, educator, businessman, civil servant, or conservationist--who ignores this message does so at his peril.

As a member of Environment Canada's Canadian Environment Advisory Council, I offered some gratuitous advice to Madame Blais-Grenier when I said that public interest in her portfolio brought with it the potential to make her, on the one hand, one of the most popular, or, on the other hand, one of the most unpopular, politicians in Canada. We all know now which route she took. Jim Bradley and the Liberal majority in Ontario are evidence of the other route.

But I am not suggesting that this is a partisan issue, because it is not. The environment has simply become good politics in Canada no matter what your political leanings. And it's good politics very simply because of the public support that's out there.

Now I can't help noting that for some reason it seems that environment hasn't yet become good politics in British Columbia, at least not in the same way it has elsewhere in the country. Maybe the freight train is still working its way up the east slopes. But I say environment hasn't *yet* become good politics in British Columbia because I predict it *will*. And I say that simply because public opinion can only be denied for so long. In this regard, please note that British Columbians consistently rate *above* the national average in their concern for wildlife. For example, 91% of the citizens of this province participate in wildlife-related activities, compared with an 84% national average; 89% say preserving endangered species is important, compared with an 82% national average; and 72% participate in non-consumptive wildlife activities, compared with a 67% national average. And, to return to our own Gallup questions, it's probably significant that 13% were "not at all satisfied" with government response to their concerns in British Columbia, compared with an 8% national average.

Those in elected office who ignore these facts will become political history.

How well are wildlife agencies responding?

So, with this attempt to understand what Canadians want when it comes to conservation, I've covered the first part of my talk. Now let me turn to the second part regarding how well wildlife agencies, both government and non-government, are responding. First, I will discuss government agencies.

Government wildlife agencies

I believe it's Rich Goulden's job to discuss how government responds in a budgetary sense, i.e., do wildlife agencies spend their dollars in proportion to what the public wants? At least that is one way of addressing the question. But as a fundraiser, I must say something about the dollars. I think the public would be outraged to see how really financially strapped wildlife agencies are. For example, to keep their own fieldwork alive, a large number of government-paid biologists are actually making personal donations to WWF to support it. We cycle their money back to their work through universities or non-government organizations (NGOs). That way, the government biologists at least get a tax receipt in return for personally making up for the inadequacies of government funding of their own work. I have nothing but respect and admiration for the commitment of the individuals doing this, but I also think it's disgraceful that such personal sacrifices must be made, particularly when I hear stories of government administrators deciding not to fund crucial work because they think WWF will. Our role, after all, as an NGO is to stimulate a greater, not a smaller, financial commitment to conservation in Canada. This lack of budgetary commitment in the face of overwhelming public political support causes me to ask, "Who's listening to the public?"

But leaving budgets for Rich to discuss, I suspect it's the quality of government's response that is at the heart of problems between government wildlife agencies and the public. Too often, comments from members of the public are received as uninformed, as what you'd expect from people who are being manipulated by the media, who in turn, it's claimed, are manipulated by the animal rights and anti-hunting groups.

I don't deny that there is a strong anti-hunting bias reflected in public opinion. But it's a free country after all. People have a right not to go sport hunting if they wish and to find themselves in a majority of the 90% who don't participate in this activity.

But I wonder what percentage of government wildlife officials are hunters, or who come at conservation from that perspective? I would guess a majority. Is it any wonder, then, that there is a perceived mismatch between public interest and public policy on the balance between hunting and non-consumptive activities?

Most people are shocked to learn that a government wildlife official's usual role is to preside over the killing of wildlife, e.g., by setting bag limits and enforcing the Fish and Game Act. Most are also surprised to learn that conservation doesn't mean preservation, but "managing" wildlife, which means killing it on a sustainable basis.

Another feeling that members of the public get, especially when they express rather protectionist views, is that they are just superficial preservationists or, worse, "anti-conservationists" who haven't yet read the World Conservation Strategy or found religion through buzzwords like "multiple use" and "integrated resource management." I warn you there is widespread suspicion that these terms simply mean a political balancing act to accommodate incompatible uses on the same piece of land, again in the interests of maintaining or promoting consumptive uses.

What I'm describing is a gulf that has developed between the people who regard themselves as professional wildlife managers and the public majority. These two groups have more than different vocabularies--they have entirely different conceptual fields.

But I also want to be fair, because in this situation the honest wildlife manager is left with a genuine dilemma. If you respond to a public that you regard as uninformed, you are unprofessional. But if you don't respond to the public, you are undemocratic. Damned if you do, damned if you don't. What you want to do, of course, is to definitely respond but to an informed public. This is precisely why their hearts and minds are being fought over right now through the media and in the schools, to better "inform" them. Unfortunately, "public education" often only means encouraging values and attitudes that make the manager's job easier by dampening public criticism and questioning.

Under no circumstances, however, is it justified in a democracy for a minority interest, such as hunters, to expect to dominate budgets and programs of agencies that have a mandate to respond to a broader public interest. I'm not personally against hunting--neither is WWF. I'm not saying hunters don't contribute a lot of money to conservation--they do; in fact, they contribute about two and a half times as much as their numbers warrant. Furthermore, I'm not saying hunting shouldn't continue, or that there shouldn't be government dollars spent in support of it. I'm simply saying there is an imbalance now with respect to what the public wants and what the government is giving the public, which, after all, is my topic. In my view, it's clearly time to spend a larger share on non-consumptive activities such as wildlife viewing and protecting endangered species. And that view, I suggest, is strongly supported by public opinion.

To summarize my points about government agencies: If you are to give members of the public what they want, give them honest information that is clear, accurate, and respects their intelligence; give them a balanced set of programs that truly reflect public priorities; and spend your very scarce dollars accordingly. Please also appreciate that a concerned, interested public is really your greatest friend and not your greatest adversary.

Non-government wildlife agencies

Now that I've annoyed and alienated my friends from government, let me see what I can do to my colleagues from the non-government sector. What does the public expect from us?

I don't have any national polls on this matter, but WWF does get over 200 letters a day, and the same number of phone calls, very much reflecting the public concern I've already described. My sense is that people want courtesy and respect as donors from NGOs, as well as efficiency, accountability, co-operation, and results.

We in the non-government sector, like government agencies, can become terribly ingrown and insensitive to our supporters, who are the people who ultimately pay the bills, just like taxpayers do for government. For us, this is especially true in a time of computer list management for members and direct mail fundraising techniques that tend to depersonalize the activities of raising money and responding to our members. For example, we forget the common courtesy of a prompt thank you, and of treating donors of small amounts with the same respect as those who give more. But these non-government dollars, after all, are being voluntarily given, over and above taxes, for something that, arguably, the government should be doing.

The public also expects efficiency from NGOs in the form of low fundraising and administration costs, professionally managed staffs that draw heavily on volunteers and donated services, and good leverage for the dollars they donate.

People expect accountability through public presentation of audited financial statements and detailed explanations of exactly how their money is spent. They also expect someone to listen when they express their views about what the organization should or should not be doing, just as NGOs do when we express similar opinions to government.

The public expects co-operation, not competition and petty jealousies between conservation organizations. People expect us to get together on issues of shared concern, such as acid rain, and they certainly don't want us spending supporters' money suing each other, settling personal scores, or mounting counter-campaigns to fight with one another. For example, can you imagine how confused the public must have been when the Ontario Humane Society took legal action against the Toronto Humane Society?

Finally, and I think most important, the public expects results. And in my view it has every right to. It is not good enough that NGOs simply fight the good fight, win or lose. We owe our supporters some victories. We must plan and tackle issues with this in mind, asking what we want to accomplish, by when, and by what specific criteria we intend to measure the success or failure of our efforts.

To do otherwise is to expect our supporters to simply underwrite our personal morality. Such an attitude means that our members' donations allow us to live virtuous lives, to fight the good fight, whether or not we succeed. How nice for us, and how totally unfair for our members! I feel very strongly about this. I'm not paid simply to try hard; I'm paid to succeed. I'm paid to accomplish specific results on behalf of our supporters.

So, if that's what the public expects of NGOs, how well are we doing? I'd say we're doing about as well as government agencies are doing with their respective set of public expectations. But maybe my standards are a little higher than those of the people we polled, because in my assessment our performance would be not great.

The truth is we all have to pull up our socks. None of us is even close to measuring up to the tremendous public support and concern that give us our mandate--one of the top public concerns in the country, I remind you.

It's fine to sneer at outdated politicians and to complain about inadequate budgets as the source of our failings. But let's make sure we're responsive and on the right track in the first place. Let's make sure we would know what to do with unlimited political support and dollars if we had them to make all our fondest dreams come true.

Conclusion

And that brings me to my conclusion, because I'd like to ask, "What are our fondest dreams?" Maybe with this question I can rebuild my friendships on both sides of the fence.

I'm sure we'd agree that if all of us--general public, government agencies, NGOs, hunters, and non-hunters--can rally around any one flag, it's the flag of conserving wildlife habitat. I'm afraid it has become almost trite to say this by now. But that doesn't make it any less true. Incidentally, that's meant as a compliment to Wildlife Habitat Canada for just how well it has done its job of promoting the importance of habitat.

As Jim Walker has pointed out, the real decisions regarding the future of wildlife are being made in ministries of forestry, mines, and agriculture and in the boardrooms of Canada's natural resource industries. I agree 100% with Jim, because this is where the most important decisions regarding the quality and extent of habitat are being made. We all have a common interest in influencing land use policies to make sure wildlife makes it into the boardroom as well. The debate about the balance between consumptive versus non-consumptive uses of wildlife only intensifies as we have less habitat and becomes academic when we have none. It follows that we should really measure our collective co-operative success in terms of progress on the habitat front.

But that's what concerns me most of all. Because on this front we're losing. The insidious thing is that people tend not to notice the losses because of what Fred Bunnell calls the "salami effect." Habitat gets taken away in small slices, with incremental, day-to-day, issue-by-issue decisions. But over time, these individual decisions, these slices, add up to consume the whole salami. The trick, of course, is to work this subtle process in reverse, to save habitat slice by slice. Still no one notices, still it happens bit by bit, but the net effect is that the salami stays intact.

Ultimately, we will save wildlife only by saving habitat. And we will save habitat only by incorporating conservation land use practices into forestry, mining, and agriculture and by setting aside a network of protected conservation lands and waters--wilderness reserves, parks, ecological areas, whatever. Both approaches are necessary: better land use and a network of conservation reserves. Both approaches lend themselves to co-operation among government and non-government organizations. And both are drastically inadequate at present to meet provincial, territorial, and national wildlife conservation goals in this country.

We must get on with a national commitment to hang on to our natural heritage in one of the few countries that still has that option. I believe that's what the public wants, I believe that's what we should give them, and I believe that's what Canada desperately needs.

Appendix A

GALLUP NATIONAL OMNIBUS, WORLD WILDLIFE FUND, JUNE 1988

Prepared for:

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Introduction

This report covers questions included in the June Gallup National Omnibus.

In total, 1022 adults, 18 years of age and over, were personally interviewed in their homes across Canada between 1 and 4 June 1988.

Case counts and percentages shown are photographic reproductions of computer printouts.

The sampling characteristics, questions asked, sampling tolerances, and a description of the sample are included in this report.

Because of a slight imbalance by sex and age, the following weights were applied to match the 1986 Census distribution:

	Male	Female
18-29 years	1.365	1.407
30-49 years	0.854	0.807
50 years and over	0.883	1.117
Did not state	1.000	1.000

Q.1-SATISFACTION WITH AGENCIES' RESPONSE TO PUBLIC CONCERNS

		REGION						AGE			SEX		EDUCATION			INCOME			
	TOTAL	ATLAN-TIC	QUEBEC	ONT-ARIO	PRAIR-IES	B.C.	TOTAL WEST	18-29	30-49	50+	MALE	FEMALE	PUBLIC	HIGH	UNIV.	UNDER $20K	$20K-29999	$30K-39999	$40K & Up
TOTAL UNWEIGHTED	1022	99	260	363	180	120	300	210	467	341	512	510	139	681	198	246	144	151	321
TOTAL WEIGHTED	1022	96	258	364	185	119	304	291	388	339	497	525	135	685	198	257	147	148	308
VERY SATISFIED	134	11	24	55	30	14	44	39	47	47	76	58	17	84	32	32	25	19	40
	13.1	11.0	9.3	15.0	16.2	12.1	14.6	13.3	12.2	13.7	15.3	11.0	12.2	12.2	15.9	12.4	16.9	12.8	12.9
SOMEWHAT SATISFIED	512	51	138	163	101	60	161	140	204	166	237	275	64	340	108	122	68	83	157
	50.1	52.8	53.4	44.8	54.5	50.5	52.9	48.1	52.6	49.0	47.7	52.4	47.3	49.7	54.4	47.6	46.3	56.5	51.0
NOT VERY SATISFIED	155	13	44	54	25	18	44	40	60	55	80	75	17	116	23	36	25	23	51
	15.2	13.6	17.2	14.8	13.8	15.4	14.4	13.8	15.5	16.2	16.1	14.4	12.4	16.9	11.5	13.8	17.0	15.3	16.4
NOT AT ALL SATISFIED	76	3	15	32	12	15	27	26	30	20	47	29	8	53	16	21	12	5	25
	7.5	3.0	5.8	8.7	6.5	12.6	8.9	9.0	7.8	5.9	9.5	5.5	5.6	7.7	7.8	8.3	8.0	3.6	8.0
DON'T KNOW	92	9	18	42	14	10	23	29	32	30	37	55	20	56	16	30	10	11	23
	9.0	9.6	7.0	11.5	7.4	8.0	7.6	10.0	8.3	8.8	7.5	10.5	14.8	8.1	7.9	11.6	7.0	7.1	7.4
DON'T HAVE ANY CONCERNS	51	10	17	19	3	2	5	15	14	22	19	32	11	36	5	15	7	7	13
	5.0	10.0	6.8	5.3	1.6	1.5	1.6	5.3	3.6	6.4	3.9	6.0	7.8	5.2	2.5	5.7	4.8	4.6	4.2
NOT STATED	1	0	1	0	0	0	0	1	0	0	0	1	0	1	0	1	0	0	0
	.1	0.0	.5	0.0	0.0	0.0	0.0	.5	0.0	0.0	0.0	.3	0.0	.2	0.0	.5	0.0	0.0	0.0
TOTAL	1022	96	258	364	185	119	304	291	388	339	497	525	135	685	198	257	147	148	308
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

DATE: 6/7/88

NATIONAL OMNIBUS - WORLD WILDLIFE FUND - JUNE 1988

Q.1-SATISFACTION WITH AGENCIES' RESPONSE TO PUBLIC CONCERNS

		===MOTHER TONGUE====			===COMMUNITY SIZE===		
	TOTAL	ENG-LISH	FRENCH	OTHER	OVER 100K	10K 100K	UNDER 10K
TOTAL UNWEIGHTED	1022	630	263	128	545	150	327
TOTAL WEIGHTED	1022	634	259	128	545	151	326
VERY SATISFIED	134 13.1	90 14.2	27 10.5	17 13.0	66 12.1	26 17.5	41 12.7
SOMEWHAT SATISFIED	512 50.1	316 49.9	135 52.2	59 46.5	265 48.6	61 40.5	186 57.1
NOT VERY SATISFIED	155 15.2	91 14.3	47 18.3	17 13.4	94 17.2	21 14.1	40 12.3
NOT AT ALL SATISFIED	76 7.5	56 8.9	9 3.6	11 8.4	36 6.5	24 15.6	17 5.3
DON'T KNOW	92 9.0	52 8.1	21 8.2	19 15.1	61 11.2	9 5.9	22 6.8
DON'T HAVE ANY CONCERNS	51 5.0	29 4.6	17 6.7	4 3.5	24 4.3	10 6.4	18 5.4
NOT STATED	1 .1	0 0.0	1 .5	0 0.0	0 0.0	0 0.0	1 .4
TOTAL	1022 100.0	634 100.0	259 100.0	128 100.0	545 100.0	151 100.0	326 100.0

TABLE 1

Q.2-TYPES OF ACTIVITES THAT SHOULD BE GIVEN TOP PRIORITY

		REGION						AGE			SEX		EDUCATION			INCOME			
	TOTAL	ATLANTIC	QUEBEC	ONTARIO	PRAIRIES	B.C.	TOTAL WEST	18-29	30-49	50+	MALE	FEMALE	PUBLIC	HIGH	UNIV.	UNDER $20K	$20K-29999	$30K-39999	$40K & Up
TOTAL UNWEIGHTED	1022	99	260	363	180	120	300	210	467	341	512	510	139	681	198	246	144	151	321
TOTAL WEIGHTED	1022	96	258	364	185	119	304	291	388	339	497	525	135	685	198	257	147	148	308
HUNTING, TRAPPING AND FISHING	159 15.6	15 15.3	30 11.8	51 13.9	33 17.7	31 25.8	64 20.9	44 15.2	60 15.5	54 15.8	85 17.2	74 14.1	27 20.1	97 14.1	34 17.3	42 16.3	21 14.6	24 16.1	51 16.5
WILDLIFE VIEWING & PROTECTING ENDANGERED SPECIES	609 59.6	44 46.2	160 61.9	216 59.4	119 64.2	70 58.4	188 61.9	180 61.9	243 62.7	182 53.7	294 59.2	314 59.9	65 47.8	416 60.7	125 63.2	145 56.4	91 62.2	91 61.3	192 62.3
BOTH OF EQUAL IMPORTANCE (VOLUNTEERED)	191 18.6	27 28.3	48 18.6	73 20.0	28 15.0	15 12.4	43 14.0	53 18.1	66 17.1	72 21.1	94 18.9	96 18.4	25 18.7	132 19.2	34 16.9	46 17.7	26 17.9	26 17.8	53 17.1
DON'T CARE (VOLUNTEERED)	19 1.9	0 0.0	6 2.4	9 2.6	2 .9	2 1.5	3 1.1	1 .5	9 2.4	9 2.5	10 1.9	10 1.8	5 3.4	10 1.5	4 2.2	4 1.5	3 1.7	4 2.8	6 2.0
DON'T KNOW	43 4.2	10 10.2	13 5.2	13 3.7	4 2.2	2 1.9	6 2.1	12 4.3	7 1.9	23 6.8	14 2.8	29 5.6	13 9.9	30 4.3	0 0.0	21 8.0	5 3.7	3 1.9	5 1.5
NOT STATED	2 .2	0 0.0	0 0.0	2 .4	0 0.0	0 0.0	0 0.0	0 0.0	2 .4	0 0.0	0 0.0	2 .3	0 0.0	1 .1	1 .4	0 0.0	0 0.0	0 0.0	2 .5
TOTAL	1022 100.0	96 100.0	258 100.0	364 100.0	185 100.0	119 100.0	304 100.0	291 100.0	388 100.0	339 100.0	497 100.0	525 100.0	135 100.0	685 100.0	198 100.0	257 100.0	147 100.0	148 100.0	308 100.0

Q.2-TYPES OF ACTIVITES THAT SHOULD BE GIVEN TOP PRIORITY

		===MOTHER TONGUE===			===COMMUNITY SIZE===		
	TOTAL	ENG-LISH	FRENCH	OTHER	OVER 100K	10K 100K	UNDER 10K
TOTAL UNWEIGHTED	1022	630	263	128	545	150	327
TOTAL WEIGHTED	1022	634	259	128	545	151	326
HUNTING, TRAPPING AND FISHING	159 15.6	108 17.1	32 12.2	19 15.0	78 14.3	18 11.8	63 19.4
WILDLIFE VIEWING & PROTECTING ENDANGERED SPECIES	609 59.6	379 59.8	155 59.6	74 57.9	366 67.1	93 61.6	150 46.0
BOTH OF EQUAL IMPORTANCE (VOLUNTEERED)	191 18.6	117 18.4	52 20.1	22 17.1	67 12.4	33 22.0	90 27.6
DON'T CARE (VOLUNTEERED)	19 1.9	7 1.1	10 3.7	3 2.0	14 2.5	2 1.1	4 1.1
DON'T KNOW	43 4.2	22 3.5	11 4.2	10 7.9	19 3.5	5 3.5	18 5.7
NOT STATED	2 .2	1 .1	1 .3	0 0.0	1 .1	0 0.0	1 .2
TOTAL	1022 100.0	634 100.0	259 100.0	128 100.0	545 100.0	151 100.0	326 100.0

Sample characteristics

		Number	Percent
National:		1022	100
Region:	Atlantic	96	9
	Quebec	258	25
	Ontario	364	36
	Prairies	185	18
	British Columbia	119	12
Community size:	Over 100 000	545	53
	10 000-100 000	151	15
	Under 10 000	326	32
Sex:	Male	497	49
	Female	525	51
Age:	18-29 years	291	28
	30-49 years	388	38
	50 years and over	339	33
Education:	Public school	135	13
	High school	685	67
	University	198	19
Income:	Under $20 000	257	25
	$20 000-$29 999	147	14
	$30 000-$39 999	148	14
	$40 000 and over	308	30
	Refused	162	16
Mother tongue:	English	634	62
	French	259	25
	Other	128	13

Note: Percentages may not add exactly to 100 due to rounding.

DISCUSSION

Frank Beebe (Falconers Organizations): I agree that reserves should be set up, but I question whether these reserves should be sacred, i.e., set aside only for university graduates or wildlife agency people, as is being done with ecological reserves in this province. I also want to point out that some habitats, e.g., the solid evergreen rain forest habitats on the Pacific coast, have a far greater potential for supporting wildlife when changed by humans than so-called completely natural wildlife habitat.

Monte Hummel (World Wildlife Fund Canada): Your concern about the elitist nature of ecological reserves in British Columbia also applies to Ontario's wilderness parks. I don't think we should be ashamed about protecting some areas very heavily if that seems to be necessary. I don't believe that the percentage of the BC landscape that's covered by ecological reserves is seriously inhibiting a very large portion of the public from enjoying the BC outdoors, and the same is true in Ontario.

Nancy Erickson (Canadian Federation of Humane Societies): I can appreciate the concerns being expressed about the elitist nature of wildlife reserves, but I support the idea that there should be areas where the general public is not allowed to go for the sake of the animals. For example, a seal-viewing industry is just being started in the Maritime provinces, following the cessation of the seal hunt, and we are finding problems already. I would like to emphasize that when you are setting aside areas for wildlife observation, the non-consumptive use, the governments must be willing to put dollars into policing and enforcement of the regulations you set up to control tourists.

Monte Hummel (World Wildlife Fund Canada): It seems to me that many of these reserves are set up at the expense of some group or other. For example, people who have been sport hunting in an area or an industry that was preparing to log an area will be disadvantaged when [illegible] uses are withdrawn, even though a majority of people will benefit and support that decision. I think that the same point might be [illegible] with respect to the seal hunt. It may be true that there is an alternative industry in terms of tourism and wildlife watching on the east coast of Canada, but it's at the expense of another group, namely the people who were sealing previously, not to mention the Inuit in the eastern Arctic.

Rosemary Fox (Canadian Nature Federation, Sierra Club of Western Canada): Mr. Frank Beebe suggested that the rain forest is not the best wildlife habitat, and that it's better when it's altered by human activities. I think this raises the question of what we mean by wildlife. I would hope that the Conference would embrace wild vegetation as being part of wildlife. I'd also like to make the point that the rain forest is a very important ecological unit in British Columbia even if it does not support some species of wildlife that some people may feel are important for humans.

Michael Halleran (BC Wildlife Federation): I am troubled by the increased barriers and friction that exist between the so-called non-consumptive wildlife user and the consumptive wildlife user. I believe that there are no non-consumers of wildlife today. For example, the flooding of the Libby Reservoir destroyed the habitat of 5000 white-tailed deer and 600 elk. The non-hunting public contributed to their demise through its consumption of electric power to the same extent as the hunting public.

Monte Hummel (World Wildlife Fund Canada): I don't disagree with you in an ultimate sense, in that we all in one way or another are consuming goods, including electricity, that impact on the environment. I think an interesting point from your example is that there should have been greater co-operation between the consumptive and the non-consumptive users about whether that dam should have been built and about its environmental impact.

Herman Schwenk (Unifarm--Alberta): I am a farmer. I think that in some way agricultural producers need to become much more involved in developing the policies that will preserve wildlife habitat. We need to be concerned, for example, about the effects of the drought in the Prairies on the habitat for certain kinds of wildlife.

Monte Hummel (World Wildlife Fund Canada): I'm not suggesting that there shouldn't be some forestry and some farming. For example, in Saskatchewan alone, there are 300 landowners in our Wild West program, 300 farmers co-operating with us to protect pastures for Burrowing Owls, because there isn't abig conflict between their desire to simply graze it and not plow it and protecting the owl.

David Neave (Wildlife Habitat Canada): Are there a lot of groups, e.g., urban developers and the forest industry, who want things from wildlife management agencies that are not consistent with various management objectives and would not allow the wildlife population to sustain itself?

Monte Hummel (World Wildlife Fund Canada): Yes, but the polling data indicate that they are in the minority. There are still development forces and anti-environment proposals, but there is greater and greater public resistance and concern about those.

David Neave (Wildlife Habitat Canada): Are those groups that want things from management agencies willing to pay?

Monte Hummel (World Wildlife Fund Canada): When people are asked if they would rather have higher prices or a clean environment, most appear to be concerned about the environment, although sometimes they are less willing to trade off some of the economic benefits when the issue turns up "in their backyard." When we estimated how much it would cost to clean up the public utilities in Ontario, there was virtually unanimous support, even when the people saw how much their utility bills would actually increase. So I would argue that the public is prepared to pay according to the polls. The growth of non-government organizations (NGOs) is also testimony to the fact that the public is prepared to support these groups over and above their tax dollars.

Tony Keith (Canadian Wildlife Service): There is a large majority of Canadians who always say that environment is important to them on Gallup polls, but who do nothing to translate that interest into political action. There is a remarkable imbalance between those poll findings and the actual influence that Canadians bring to bear on their political parties to change party policies to reflect those views.

Monte Hummel (World Wildlife Fund Canada): I think the question really is why is there this mismatch between public interest and public policy. You're suggesting that it's partly because there is a lethargic component of the public. In my experience, though, most people given the opportunity to act on their concern will do it. Our Montevarity campaign to save the Montevarity Cloud Forest, where people, for $25 an acre, could actually save a chunk of the tropical forest, is a good example. I cannot answer the question as to why we are not getting more action on the environment in Canada given that there is supposed to be a fairly well-trained, perceptive group of people advising senior politicians on these matters.

Fred Bunnell (University of British Columbia): Bruce Strachan pointed out in his welcoming address that British Columbia has a greater diversity of wildlife than any other province. He neglected to mention that British Columbia probably also has the greatest diversity of NGOs concerned with wildlife than any other province, at least 120. Can you suggest any tactics to this collection of NGOs that would make them more effective?

Monte Hummel (World Wildlife Fund Canada): I have suggested that people like Jim Walker have got a lot of political support and a mandate to do things in this province, and that on shared issues we can get together and accomplish a lot. I don't think that it is desirable for people to turn to outside agencies, whether they are government or non-government agencies, to solve their province's environmental problems. When we involve outside agencies we often develop a greater rigidity and determination not to change or to do something. I think this has haunted the wolf control issue in British Columbia to a certain extent. In terms of strategies, we have to be very careful to get home jurisdictions to face up to their responsibilities to solve their own problems and respond to their own concerned public and not think that somehow outside agencies are always going to be necessary to solve problems.

Howard Paish (Old-fashioned independent hunter/naturalist): One of the comments that you made, Monte, was that the Canadian public would be appalled if it knew how underfunded our wildlife management agencies are. I know, as a former NGO official, how underfunded they are. It bothers me that I spend more each month to feed my hunting dog than I spend for my bird hunting licence for the year, that I have as much money tied up in one shotgun as I will pay in my entire life for bird hunting licences in Canada, and that I have spent more money on camera gadgets than I will ever pay in non-consumptive user fees. I think that we have to realize that this free ride by those of us who are the users, both consumptive and non-consumptive, is over. We keep trying to find backdoor approaches, e.g., taxes on sporting goods and selling wildlife art, instead of going through the front door. This is the challenge I send to the NGOs--forget that vague uncommitted public we have all admitted we have difficulty in pressing into action, but convince Treasury Boards, people who make financial decisions in the other large resource industries, and so on.

Larry Jahn (Wildlife Management Institute, USA): In our Institute we've done about 80 studies post-World War II, and I agree that the real challenge is to respond with new institutional arrangements to capitalize on the broad public interest and also to move forward to strengthen programs. I suggest that you look at the staff of the individual members of your Parliament--in my experience, you are dealing with a small group of people with a variety of backgrounds who aren't necessarily knowledgeable in natural resources and the need to move forward with management. That's where NGOs are needed, with a stronger, educated commitment of time and dollars and moving forward. It is also important to get this broad spectrum of NGOs working together on common objectives, so that your Members of Parliament cannot play one group against another when they have slightly different views. The 1985 Farm Act, with a coalition that at times ranged between 40 and 60 organizations, is one example of success in the United States.

On the matter of funds, the state agencies and some of the other conservation groups in the United States are underfunded. There have been some new approaches recently to raise funds. For example, in the State of Missouri there has been an enlargement of the sales tax since 1976, so that one-eighth of 1% sales tax is yielding about $40-$44 million to supplement those constrained budgets. In addition, the citizens supported a second sales tax proposal of one-tenth of 1% for different conservation purposes, yielding an additional $25 million per year.

Regarding wetlands, most people agree that wetlands have a complex of public values that should be perpetuated over time. However, we do not have the institutional arrangement to achieve that objective of perpetuation, except for perhaps floodplains and shorelands. I think what we need is a presumption/rebuttal/appeal process that applies to all wetlands in all jurisdictions.

Monte Hummel (World Wildlife Fund Canada): I agree with "user pays," but I think we should realize the extent to which we are already paying--about $100 million is spent per year in Canada to conserve wildlife habitat of one kind or another, roughly half of which is provided by the non-government sector and 90% of that provided by Ducks Unlimited (90% of that coming from the United States). Ducks Unlimited is committed to $350 million of the $1.5 billion North American Waterfowl Management Plan. I think we have every right to expect provincial, federal, and municipal government expenditures to reflect the priorities that the taxpayer is expressing.

Adeline Nicol (Federation of BC Naturalists): You need help in better educating the people about what you are able to do with what you've got. They really seem to think that anything they ask for you should be able to produce. I think this Conference, by opening it up to people like us, is a step in the right direction to public education.

Monte Hummel (World Wildlife Fund Canada): In one of the Decima polls, 87% of the public was upset by the lack of action protecting the environment. One in two Canadians don't think our Prime Minister should sign a Free Trade Agreement with the United States without first getting an agreement on acid rain. There is genuine concern out there, and we have every opportunity to take advantage of it.

Session 1: "Setting the stage" (1)

WHAT WILDLIFE AGENCIES ARE DOING TO MEET THE CHANGING WANTS AND NEEDS IN CANADIAN SOCIETY

Rich Goulden
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Although I shall address the agenda topic assigned to me--"What are the wildlife agencies spending?"--I believe a somewhat broader view of wildlife agency activity is required in order to elucidate this subject. I have not, therefore, confined myself to a mere audit of wildlife agency expenditures. I shall instead attempt to do three things:

(1) briefly examine changes that have occurred in Canadian society;

(2) allude to the implications of these changes for wildlife managers; and

(3) examine some responses of wildlife agencies to these changes.

Methodology

In late March, I canvassed government wildlife agencies and non-government organizations (NGOs), seeking answers to a number of specific questions. I then attempted to gain a quantitative appreciation of the issue by analyzing the apportionment of agency budgets; the scope of their mandate, role, or mission statement; the scope of agency programming efforts; the orientation of agency research and management reports; and the direction of wildlife information and educational programming. I received a mountain of information, all of which I examined. However, the unevenness of the responses made some direct statistical comparisons rather difficult. Nevertheless, a relatively clear, qualitative picture was apparent. I then refined this picture in places by a more specific comparison of wildlife programming in selected jurisdictions across Canada.

Changes in Canadian society

To set the stage, I think it would be useful to examine change and its impact on Canadian society and to consider the implications of these changes to wildlife management.

Speed and complexity of change

The first 650 of the last 800 lifetimes were spent in caves. Only in the last 70 did we have writing; in the last six we had the printed word; in the last four we measured time; in the last two we had electric motors; in the last one we've had colour televisions, computers, and space travel. Change has at least two components: speed and complexity. In terms of speed, the Squib Pharmaceutical Corporation says that one-half of the drugs they will sell in 1990 were not on the market in 1985. In terms of complexity, we can look at technology, which is economical, user friendly, and available. It is so available that although the cost of cars has increased four times and hotel rooms eight times between 1963 and 1986, the cost of a long-distance telephone call on average has dropped from $3.00 to $2.82.

Aging populations

The average life span in the 1890s was 48 years; in the 1980s, it's 71 years. The life expectancy of Canadian women increased by 5.6 years between 1961 and 1985--they now live to almost 80 years of age. The life expectancy of Canadian men has increased by 4.6 years during the same period. People 55 years and older now constitute 30% of the adult population. The "seniors" component of the population is growing at twice the rate of the general population. In the 20-year period between 1966 and 1986, the population group 65 years and over doubled (from 1.3 million to 2.7 million) in Canada. People between 55 and 64 years of age have average household incomes, in the United States, 8% above the national average. This group's discretionary income is 16% above the US national average, which is the highest for any age group.

Baby boomers

For the baby boomers--the post-war baby boom of young adults aged 38-43 years--postponement of childbearing has been the rule. Forty-two percent of births are to first-time parents who are now older and more affluent. The impact has been significant on the clothing industry; for example, blue jeans can now be bought in larger sizes. Automobile sales are geared to the upscale foreign car market. There have been changes in child education, alcohol preferences, and the fitness industry. There is a preoccupation with health, fitness, and nutrition, and a proliferation of health stores, spas, and fitness publications. Supermarket preferences have changed; yogurt and mineral water are important items now. Cigarette smokers aged 15 and over in Canada dropped from 50% in 1966 to 20% in 1986. There was a decrease of 7% in the total liquor consumed in the United States from 1976 to 1986. "Coolers," relatively unknown in the early 1980s, increased in sales by 72% in one year, from 1985 to 1986. There has been a phenomenal growth in the direct mail sales industry. Mailboxes are filled with colourful, high-quality catalogues that promote educational toys, upscale clothing, children's books, and baby paraphernalia. An estimated 40% of baby-boom parents are willing to make direct mail purchases because two-career couples say they just don't have time to stroll through the shopping malls.

Travel industry and sporting activities

There have been major changes in the travel industry. Eight hundred lifetimes ago, a chariot covered 30 kilometres per hour. Two lifetimes ago, trains covered 150 kilometres per hour. Today you can walk on the moon. There is a proliferation of services to encourage travel as well. We have frequent flyer programs, VIP credit cards, and integrated hotel/transportation/recreation business packages. There are also changes in sporting/leisure activities. There is an increase in the endurance sports, such as cycling and long-distance running. The popularity of dangerous, thrill-seeking activities, such as white-water rafting and hang-gliding, has increased. Corporate training is now based on principles of risk, danger, and mutual dependency. There is a desire for unique, remote wilderness experiences, usually involving the viewing or hunting of wildlife.

Employment patterns

There have been significant changes in employment patterns. Between 1951 and 1985, the percentage of people employed in the service industries rose from 47 to 70%, whereas the proportion employed in the goods-producing industry dropped from 53 to 30%. Remember that most traditional wildlife clients are employed in that goods-producing category.

Clients

There are many different client groups--a book written by Alvin Toffler called "Previews and Premises" will help you appreciate this. Human rights, women's rights, and native concerns need to be considered now. The non-consumer demand has to be considered. We now have the influence of women in decision making--women influence youth and politicians and business decisions. In Canada, women traditionally have not participated much as hunters and harvesters. There are changes in the ethnic composition of populations in this country. There are different wildlife management and use traditions among Asiatic people and Pakistanis, East Indians, Filipinos, Greeks, Italians, Portuguese, and Malaysians, all of which are increasing in our population.

Family patterns

There are also changes in family patterns. The percentage of one-person households has doubled from 10 to 20% between 1961 and 1986. There is an increase in single-parent families, and along with this a lack of time to spend in the countryside communing with nature or pursuing traditional uses of wildlife.

Rural to urban shift

Finally, there is a shift in the population from a rural to an urban setting. There is a loss of touch with the land--the cycle of life and death. There is the loss of the mentor/teacher/father who harvests wildlife. We now have the concrete canyon ecologists who enjoy wildlife simply by vicarious experience.

Attitudes of government wildlife agencies

I tested the attitudes and opinions of government wildlife agencies about the need for program changes with six questions.

(1) "Is there too much emphasis on consumptive use and hunting?"

Answers here were mixed, but most agreed that the relative balance in agency effort and spending was not appropriate. Respondents from remote, rural, and low population jurisdictions generally agreed that there was not too much emphasis on consumptive use and hunting, based on their assessment of local needs and wants. There was strong agreement that more effort and attention were required in meeting the needs and wants of the non-consumptive user. There was a distinct lack of enthusiasm, though, for the idea of pillaging consumptive use programs to obtain the necessary money to serve the growing non-consumptive user demand. Yet, many agencies provided evidence of having done exactly that. It was pointed out that consumptive use of wildlife is inextricably linked to our country's history, and it continues to be an essential element of the socio-economic fabric of Canadian society, particularly in the remote areas of the country. In essence, the message that came through to me is that we ought not to apologize for consuming wildlife or serving the needs of wildlife consumers, but that we also must recognize the emerging needs of those who ostensibly do not consume it. It was further emphasized that the consumptive user has been willing and active in contributing direct financial assistance and support for wildlife programming of benefit to all forms of wildlife and wildlife users, and evidence to substantiate this was provided in legion.

(2) "Is the demand for non-consumptive use real?"

There was virtually unanimous agreement that it is real; however, there were a couple of valuable insights provided that can help us evaluate and respond to this demand, one of which follows:

> There is also very much a growth in what I would describe as third-party interest which is, in effect, a society-at-large overview. This, I believe, is being transported from the United States and it is, in fact, reflective of their legal public trust institutional arrangement. At any rate, the public at large, however they manifest themselves, are relating to resource agencies more and more in the context that the agency is managing the public domain in trust for third-party interests. This translates into meaning that we have a very large constituency interest, much larger than simply hunters and active non-consumptive users, and perhaps this is why in our surveys we pick up such large indications of interest which, when investigated closely, are not substantiated by the realities of participation.

(3) "What is happening to traditional users?"

Respondents pointed out a number of things. Traditional users are also non-consumptive users. Traditional users are decreasing in number and in apparent influence relative to others, mainly because of the changes in Canadian society that I described earlier. However, actual influence of traditional users remains fairly strong when you factor in their historical, cultural, social, and economic dependencies.

(4) "Is there a place for the radical non-user in current wildlife management?"

Here, opinions varied. Most agencies said yes, because such groups are a fact of Canadian society. Others argued that governments must strive to meet the needs of diverse interest groups, and this usually necessitates some form of trade-off. To play an integral role in wildlife management, all user groups must be prepared to negotiate. Therefore, one respondent stated flatly that "a radical non-user group which is unable to make trade-offs has no role in the decision-making process."

(5) "How far does the new public want to go in manipulating the natural ecosystem to produce animals?"

Respondents pointed out that this is really a "how to" type of question that can be answered only through direct consultation with wildlife interest groups, and there is not, in fact, one public but several publics, each with different needs and wants. One respondent stated that the whole spectrum is there, from people who are absolute preservationists to those who are demanding that we maximize their species of interest. There is no question that you can do in one place what you cannot do in another place. Another respondent astutely reflected, and I quote:

> Human activity and by-products are globally omnipresent and already limit most natural systems in one way or another. A radical "hands-off" approach may be a technical option whose time has passed. If so, the popular appeal of a hands-off approach is basically romanticism. The notion of wild versus non-wild with all the connotations of untramelled freedom, no limiting fences, beyond the range of human control and influence, may become less and less useful as practical distinctions for wildlife management purposes.

The writer closed by saying: "The notion of a frontier with domesticated life on our side and wildlife everywhere beyond it is outdated."

(6) "Is there a greater demand for simply preserving areas without attempting to manage everything intensively?"

The short answer is, of course, yes. But respondents pointed out the misleading nature of that question, and I was advised that one cannot safely generalize about how intensive the management has to be to maintain or restore a given natural ecosystem. Recent global studies suggest that Canada could be the last country with significant free-ranging wildlife by the 21st century. However, this will necessitate well-researched management options and astute public communication. Both of these depend on continued or increased financial support for wildlife management, which is, in fact, being withdrawn at present.

Attitudes of NGOs

I contacted and received replies from the Canadian Wildlife Federation, World Wildlife Fund, Ducks Unlimited Canada, Wildlife Habitat Canada, and the Canadian Federation of Humane Societies. In general, these NGOs all agreed either that there was too much emphasis on consumptive use and hunting or that there was a lack of management resources in some areas of non-consumptive use management. All agreed that the demand for non-consumptive use was real; however, some argued cogently that we should be focussing more attention on the common interests among conservationists and not on the divisive and relatively minor issue of hunting versus non-hunting.

It was commented that non-consumptive users should not be regarded as non-impact users. In fact, the non-consumptive user is more likely to concentrate in large numbers at certain unique sites to seek out the rare rather than the common and thereby seriously impact that which, by definition, most needs solitude. Another respondent said that if traditional recreational users are declining, it is because managers are not providing innovative solutions to ensure quality recreational experiences. Others said that there is a strong media bias against traditional forms of consumptive use, largely because of the social, cultural, and educational background of the electronic media opinion shapers.

All respondents agreed that there was a place for the radical non-user. One succinctly observed that the radical non-user tends to be urban and articulate, which provides advantages against the local, rural trapper/hunter organization in any discussion or debate.

Opinion was sharply divided among NGOs concerning how far society wants to go in manipulating habitat or preserving areas. Some argued that man has already intervened in most natural environments, and a purely non-interventionist approach was both naive and artificial. Others recommended "giving wilderness a try." The balanced view seems to be that we cannot and should not content ourselves with a few remnants or oases of unmanaged wilderness while allowing the vast majority of our landscapes to degrade and become impoverished of wildlife.

Agency responsiveness to changes

Government agencies were asked to provide specific information that would demonstrate their responsiveness to the non-consumptive user public. I examined all responses. However, for statistical purposes, I selected five wildlife jurisdictions upon which to base my findings, based on the comprehensiveness, timeliness, and representativeness of the replies. The agencies selected were the Canadian Wildlife Service and the Alberta, Manitoba, Ontario, and Nova Scotia wildlife agencies.

Role of agency

The first thing I did was examine role and mission statements. All agencies espoused concern for and a commitment to manage non-game and/or endangered wildlife. All recognized the importance and the legitimacy of non-consumptive users and the need to orient some wildlife programming specifically to this end.

Non-game and endangered species programs

All five wildlife agencies had well-defined non-game programs. Not surprisingly, though, these initiatives are relatively new and expanding rapidly. Direct agency funding appeared deficient in some cases; however, this was offset by very significant financial and logistical support from volunteer and private conservation groups. Table 1 indicates the orientation of research and management reports produced by the five jurisdictions.

Table 1. Research and management reports (since 1986).

Type of report	CWS	Alberta	Manitoba	Ontario	Nova Scotia	Total	%
Consumptive use	7	40	16	23	2	88	42
Non-consumptive use, general interest	60	26	12	23	2	123	58
Total	67	66	28	46	4	211	100

In summary, of 211 reports from five jurisdictions over the last 2.5 years, 88, or 42%, reported on consumptive use research and management studies; and 123, or 58%, reported on studies of a general or non-consumptive use orientation.

Information/education programs

The printed information/education brochure output from five jurisdictions was evaluated with respect to its orientation or target audience. I examined Manitoba's situation more thoroughly because I had total access to it.

Table 2 indicates that of the 70 information and education publications or brochures in Manitoba, 14 (or 20%) were directed to the consumptive user, and 56 were directed to the general conservationist or the strictly non-consumptive user.

I should note that I examined only the 27 wildlife titles that were listed in the Ontario Ministry of Natural Resources Publications Catalogue. Ontario puts out a tremendous number of other publications that, had I the skill and knowledge to be able to evaluate them and categorize them into consumptive versus non-consumptive orientation, probably would have been heavily weighted in favour of non-consumptive use.

Table 2. Information/education publications.

Type of publication	CWS	Alberta	Manitoba	Ontario	Nova Scotia	Total	%
Consumptive use	7	10	14	16	3	50	30
Non-consumptive use	21	18	56	11	8	114	70
Total	28	28	70	27	11	164	100

In any event, of 164 products from official information/education departments of five governments, 50 (30%) dealt with consumptive use topics, and 114 (70%) were devoted to general conservation and the non-consumptive use field.

Wildlife films

I next looked at video products, wildlife films, and slide shows. These were similarly evaluated. I should point out that the Canadian Wildlife Service and the Government of Nova Scotia do not directly produce wildlife films or videos that could be evaluated in this way. However, of the 299 film titles examined from Alberta, Manitoba, and Ontario, 77% were aimed at the non-consumptive use audience, whereas 23% were intended principally for the consumptive use audience.

Table 3. "Wildlife" films.

Type of film	Alberta	Manitoba	Ontario	Total	%
Consumptive use	40	20	9	69	23
Non-consumptive use	64	117	49	230	77
Total	104	137	58	299	100

Publication budgets

I then started looking at budgets of wildlife agencies--publication budgets first of all, because that's what the people out there see. Table 4 indicates that the four reporting jurisdictions collectively spent nearly $400 000 on publications--53% for consumptive use type of materials, and 47% for items of interest to the non-consumptive user and the general conservationist.

Table 4. Publication budgets, 1987/88 (in thousands of dollars).

Type of publication	CWS	Alberta	Manitoba	Ontario	Nova Scotia	Total	%
Consumptive use	5%[1]	140.0	34.5[2]	N/A[2]	31.5	206.0	53
Non-consumptive use	5%[1]	38.0	24.3[2]	N/A[2]	22.9	85.2	22
General	90%[1]	70.0	0	N/A[2]	30.0	100.0	25
Total	100%	248.0	58.8	N/A[2]	84.4	391.2	100

[1] Actual number not provided.

[2] Budget apportionment not available.

Overall government budget allocation

What's becoming apparent is that other sections of our departments or ministries are beginning to cater very heavily to the non-consumptive user public, leaving the wildlife agencies alone to provide information/education programming for the traditional consumptive users. In other words, there are a lot of new players beginning to show up on the field, and they are applying their efforts to the wildlife viewer and the vicarious user.

I next looked at overall government budget apportionments. Four of the five jurisdictions provided rough apportionments of their 1987/88 wildlife categories. In summary (as shown in Table 5), of about $29.8 million collectively allocated, 32% went to consumptive use management, 6% was allocated to identifiable non-consumptive use management, and 62% went to general management.

The bottom line is that about one-third went to consumptive use programming and about two-thirds went to either non-consumptive or general interest programming. I hope you appreciate that there is some difficulty in separating those two.

It is obvious that although considerable effort is being devoted to non-consumptive use management, there appears to remain a noticeable underallocation of funds devoted specifically to non-game management and research. Arguably, the budget apportionment to non-consumptive use management is distorted by the fact that much programming for the non-hunter is provided as a by-product of major initiatives intended to enhance huntable species. Moreover, from all indications, Ontario has devoted considerable financial resources to non-consumptive use management; had the $18 million Ontario Ministry of Natural Resources budget been apportioned into categories, this surely would have altered the balance more in favour of non-game management.

Table 5. Budget allocations, 1986/87 or 1987/88 (in thousands of dollars).

Type of management	CWS	Alberta	Manitoba	Ontario	Nova Scotia	Total	%
Consumptive use	4 110	1616	2825	N/A[1]	1044	9 595	32
Non-consumptive use	215	239	1161	N/A[1]	176	1 791	6
General	13 980	1831	545	N/A[1]	2050	18 406	62
Total	18 305	3686	4531	18 000[1]	3270	29 792	100

[1] Ontario unable to dissect budget into consumptive/non-consumptive use management.

Summary

Government and non-government wildlife agency attitudes reflect an understanding of, and an acceptance of, non-consumptive use management. Agency role and mission statements confirm government policy to provide programs of specific, although not necessarily exclusive, interest to non-consumptive users. Non-game programs and endangered species programs are sophisticated but not well funded in all cases. Research and management technical report production indicates a preponderance of effort--58%--on studies that are of a general or non-consumptive use orientation. Printed wildlife information and education brochure production is heavily weighted--70%--toward the interests of the non-consumptive general wildlife user. Film production even more heavily reflects an orientation towards the non-consumptive user, with 77% of the products so devoted. Publication budgets are about evenly split in their orientation, with slightly more effort--53%--going into the products of interest to the consumptive user. Overall, wildlife budgets continue to reflect a significant shortfall in allocations towards exclusive non-consumptive use management, although the situation may not be as bleak as the figures would appear to suggest.

I would suggest that the delay in reapportioning budgets more in favour of non-consumptive use reflects to some extent the inability of governments to clearly identify this user group. Programming that does not have a well-defined target group is always subject to difficulty before treasury boards, and the case in point, in my opinion, is no exception. It is difficult to withdraw programs from traditional users, particularly when the new users are rather amorphous and hard to identify. However, it is my belief that wildlife agencies, both government and non-government, have turned the corner. They no longer need to be convinced of the reality or the importance of the non-consumptive user. It is merely a question as to how to better identify such users for the purposes of target-specific programming that will pass the scrutiny of rapacious treasury and budget officers.

Conclusions

In conclusion, are wildlife programs outdated? No, they are not outdated, nor are they as totally reflective of society as might be warranted by social change indicators. The wants and needs of non-consumptive users are beginning to be served by other sectors of the public bureaucracy, such as information/education units, parks agencies, and even forestry branches.

I am going to close by sounding a note of warning and one of exhortation. Prior to my note of warning, I am going to read a quotation about change from the current issue of Enroute magazine, which quotes Vancouver futurist Frank Ogden as saying:

> Those who fight it (change), resist it, ignore it, or run away from it quite likely will be victimized. Those who embrace it, run with it, try to understand and ride the stallion of change, quite likely will profit from it.

I would say watch out for and measure changes in your client base and their changing preferences. If you don't respond to their needs, someone else will, and your agency could be relegated to the backwaters of program funding.

Now that exhortation--I quote the now-famous lines of Paul Simon from his popular Graceland album:

> These are the days of lasers in the jungle,
> Lasers in the jungle somewhere.
> Staccato signals of constant information.
> These are the days of miracle and wonder.

And I say to you, let us not focus so hard upon our parochial aims that we fail to see the merits of mutual effort and thereby lose the opportunities available in these days of miracle and wonder.

PRIMARY USE OF WILDLIFE

Roy Moses
Old Crow
Yukon

I have been asked to discuss the primary use of wildlife, which means uses that consume wildlife--nowadays called "consumptive uses." First, I want to give an overview of modern primary uses of wildlife in northern Canada. Second, I think it would be worthwhile to project today's primary use trends into future demands for wildlife by consumptive users.

Primary use of wildlife can be divided into three basic categories: survival, money, and culture. Each of these categories has undergone tremendous alteration since European contact, particularly in this century. Most of the changes have reduced our dependence on wildlife, but some recent changes have also increased it.

Survival

Let us look first at survival--the basic needs of food, clothing, shelter, and transportation. Originally we depended greatly on wildlife for all of these needs, but now it is very different.

Transportation

For transportation, we have replaced moose hide boats and sealskin kayaks with freighter canoes, aluminum and fiberglass boats, and outboard motors. Our dog teams fuelled by fish and game have been replaced by snowmobiles, all-terrain vehicles, and four-by-fours. Whereas a visit to distant relatives was often an epic journey by land and water, now it may take only a couple of hours by chartered aircraft. So wildlife plays virtually no role in modern transportation for us.

Shelter

For shelter, we have replaced skin tents with canvas, and our communities consist of log and frame houses with varying degrees of modern conveniences. So wildlife is no longer a factor as far as shelter is concerned.

Clothing

For clothing, we have largely replaced wildlife products with manufactured materials, with a few notable exceptions. Throughout the North, moose hide slippers, vests, mittens, moccasins, and mukluks are still very popular, both as workwear and as decorative clothing. The best moose hide is native tanned, but it is getting scarcer, and commercial tanned hides are becoming more common. In the western Arctic, caribou hide is also used a bit for clothing, but mainly in decorative pieces. A lot of caribou hides are still used, however, for sleeping mats when people are living on the land in tents.

In the central and eastern Arctic, sealskin mukluks called "kamiks" are still widely used for winter footwear. Caribou parkas are still used in the winter, especially for hunting. And everywhere up north we use fur for trim--wolf, wolverine, and fox for parkas; muskrat or beaver for slippers; just about anything on moccasins; muskrat, marten, and fox for winter hats. Every trapper keeps some hides for trim, and the co-ops sell strips to others who need it.

So wildlife still plays an important role in clothing, partly because some wildlife products are superior for certain purposes, and partly because some wildlife materials are the most attractive for our traditional clothing styles.

Food

The last and most important component in the survival category is food. Unlike the other survival factors, our reliance on wildlife for food has not decreased that much from former times. I recently read in a report called "Sharing Power with Native Users" that larger native communities, i.e., over 1000 people, get 30% of their calories and 50% of their protein from wild food. Smaller communities get 50% of their calories and as much as 80% of their protein from wild food.

In Old Crow, which has a population of less than 300, most people eat wild meat 95% of the time. The only time we go to the co-op to buy chicken or pork chops is when we want a change. This is not only because we prefer wild game, but also because of the cost factor. My village of Old Crow is over 100 air miles from the nearest road and 500 miles from Whitehorse where the co-op gets its supplies. By the time an eight-pound roast of beef has been trucked 1000 miles up the Alaska Highway and flown another 500 miles to Old Crow, it costs about $80 or $90. Meat isn't that expensive everywhere across the North, but it is generally high-priced.

So the bottom line is that wildlife continues to be the basis of our food supply. For people adapted to a high-protein diet, living in remote regions where raising livestock is impossible, our reliance on wild food is unlikely to change. When you consider that native populations in both the Yukon and the Northwest Territories are on the increase, and even most of the small communities are either stable or increasing, the need for wild protein could very well increase. At any rate, as a consumptive use of wildlife in northern Canada, food is paramount.

Money

I now come to the second category of primary use of wildlife, and that is money. Let me first explain that there are very few ways to make money up north. In small communities like mine, there are only a few jobs, mainly with the government. There may be some summer work, but just about everything grinds to a halt in winter. In small communities you can always eat thanks to our precious wildlife resources, but making money is a different matter. To make money you have to sell something that people want, and our little towns don't have much to sell unless there is a mine or an oil well nearby.

So this is where wildlife comes in as one of the very few saleable items in the North. The major sources of income from wildlife consumption are trapping, big game hunting, and what I'll call "by-products."

Trapping

It's really ironic that one of our most reliable resources--fur--should be linked to the most unreliable world market--fashion. Over the years, trappers have followed the fickle finger of fashion from beaver to mink to fox to lynx, from long hair to short hair and back again. But whatever the trend, at least there was always a demand for some fur or other.

Fortunes have been made in trapping, but rarely by the trappers. When it took 16 beaver to buy a musket in Rupert's Land and a beaver would buy 16 muskets in Europe, it's not hard to see where the profits went. However, some trappers did extremely well during the roaring '20s when fur fashions peaked perhaps for the last time. In a government report for that period, I found this statement: "Of the forty-five Eskimo families who traded into Aklavik in 1923, most were reported to own schooners valued at between $2,000 and $7,000 each and some had bank accounts in Seattle."

Well those days are past, and well-known Bankslanders who were making over $30 000 annually in the early 1970s no longer earn as much from trapping. To give you an idea of modern trapping incomes, here are a few figures. In the Yukon, the total 1985/86 fur revenue was $1 045 254, which for 482 active trappers averages out to $2168 each. In the Northwest Territories, the 1985/86 revenue for 2922 trappers was $3 268 000, which averages out to $1118 each.

This is not big bucks. In fact, for a number of years, the Northwest Territories has been augmenting trapping incomes with incentive grants. But the bottom line--and this is vitally important--is that in the face of no work at all, many people rely on trapping for the meagre living it provides. To many it means the difference between self-esteem and social assistance. In my village we have only one family on welfare, which would not be the case without trapping.

So that is the present situation with respect to trapping, except for one important factor--the anti-trapping lobby. If the British begin labelling fur imports and other European countries follow them, trapping could disappear forever. This would be devastating, both economically and culturally, to our northern communities. Accordingly, the territorial governments have been actively campaigning against fur labelling and to make animal rights groups aware of the fundamental reliance of northern people on the fur industry. Such efforts convinced the Greenpeace Foundation to withdraw its objections to trapping, but other organizations are still voicing strong opposition.

Big game hunting

Until the late 1960s, big game hunting rarely involved native people except as guides. But when the Northwest Territories introduced polar bear sport hunting, native people graduated from guides to outfitters. Whereas the sale of a polar bear hide benefits only the hunter and his family, that same polar bear sold as a big game hunt benefits the entire community, which provides food, accommodation, dog teams, and guides. In 1986/87, the average value of a polar bear hide was about $2000, but the average cost of a polar bear hunt was $12 000. With 74 hunts last year, the total revenue was $880 000, spread over a dozen communities.

Musk-ox sport hunts are also offered in the Northwest Territories, often in combination with polar bear hunts. In both cases, the animals are harvested on a carefully regulated quota basis, so that there is no threat to the resource.

With the possible elimination of trapping, other northern communities are seriously looking at big game outfitting to offset the loss of income for people who are highly trained in wildlife harvesting but who would have no market at all for their skills. Thus, outfitting may become increasingly important as a consumptive use of wildlife in northern Canada. Fortunately, it is very compatible with the other principal demand for wildlife as food. In fact, the meat from trophy animals would likely be distributed within the community that offered the sport hunt.

Meat and by-products

In addition to trapping and sport hunting, northerners make money from wildlife in a variety of other ways. In the Northwest Territories, commercial hunting is permitted for five caribou herds and two musk-ox populations. Most of this meat is sold domestically, and a lot of it is handled by three country food stores that sell everything from muskrats to muktuk, mainly to northern residents but also to tourists.

Another source of revenue from wildlife is the sale of what can generally be called by-products, i.e., animal parts that are available from other consumptive uses. Larger northern centres and even some of the smaller villages have craft shops that offer jewelry, clothing, and artwork made from antlers, bones, hides, and hair.

There are also markets mainly in the Far East for other products. But, apart from reindeer antlers, which do not qualify as wildlife, the trade in caribou antlers and the parts of several other species for use as aphrodisiacs, for example, has been greatly exaggerated by the media.

Versatility

With respect to the economic role of wildlife in our northern communities, it must be stressed that it is often the only renewable resource with viable domestic and southern markets. In short, it is the one thing we can rely upon to make money one way or another. And if one market like trapping fails temporarily, we hope we can be versatile enough to switch to other markets, e.g., commerce, sport hunting, and tourism.

Culture

The last major category in primary uses of wildlife is culture. The importance of wildlife to our native cultures cannot be overstated. In fact, our cultures are little more than a rich collection of traditions based on the consumptive uses of wildlife. These traditions are the legacy of centuries of survival that depended on knowledge and respect for wildlife. In this century, northern native people sacrificed several generations to the concept of assimilation, and, during that period, many of our traditions fell into disuse. But assimilation proved to be a mistake, and with that realization has come a renewed pride in our cultural heritage and a revival of our tradition in an effort to rebuild our societies.

This process ultimately relies on present-day consumptive uses of wildlife that reinforce our customs as we practise them daily in our communities. For instance, a couple of months ago I got three caribou for my family. I know I will be sharing a lot of that meat. If some relatives run out of meat or if we hear of some elderly people who have no caribou, we will share ours with them. Sharing wildlife in this way binds our families and our community together and makes us feel good about one another. Another important tradition is honouring our elders. I spend a lot of time talking to the elders about the old ways and about how to hunt and trap. And, like old people everywhere, our elders are pleased to be consulted and feel useful in our community by sharing their knowledge with us.

This is what makes the anti-trapping campaign doubly threatening, because of both the economic and cultural losses that would befall us. Some people tell us trapping is not a legitimate tradition because it was invented by the Europeans. That's a minor point. The main point is that what we consider our traditions are derived from consumptive uses of wildlife, and if we wish to preserve our cultures we must be able to maintain these uses as part of our modern lifestyles.

Future of primary uses of wildlife

I now come to the future of primary uses of wildlife in northern Canada. Based on the contemporary lifestyles of northern people, which blend modern technologies with ancient traditions, and based on the practical options for maintaining such lifestyles in the North, the consumptive uses of wildlife will continue to be a mainstay of our food supply, income, and cultural integrity.

Although southern regions of Canada may be shifting away from consumptive uses of wildlife, they do so because their economies and societies function very differently from our own. In planning for wildlife conservation and management, these differences should be recognized and respected. And, in fact, they are in both the Yukon and Northwest Territories, where the trend is toward co-management of wildlife by native people and the governments. Under such systems, the goals for management emphasize the maintenance of consumptive uses at levels that do not threaten wildlife populations. After all, no one has a greater vested interest in conserving wildlife than people who depend on it for food on their tables, cash in their pockets, and harmony in their communities.

ANALYSIS OF DECLINING DEMAND FOR CONSUMPTIVE USE OF WILDLIFE

Jon Gilstrom
Planning Co-ordinator
Washington Department of Wildlife

The Washington Department of Wildlife is often asked, "Why is hunting better in Montana than in Washington?" We thought the answer was obvious--Montana is a bigger state than Washington and has a lot fewer people--so we decided to pull together the information to document that. At about the same time, we asked an economist at our Department of Revenue who predicts general income revenue for the State of Washington to help us put together a model that we could use to predict revenue from the sale of hunting and fishing licences. When we looked for variables to use in the model, we discovered that some of the reasons why hunting is better in Montana turned out to be the same as some of the reasons why our hunting licence sales were collapsing. So the two projects merged with each other.

I would like to show you the results of that effort. The previous speakers, particularly Rich Goulden, have made it clear that we have the same problems in the United States as you have in Canada. I am aware of a report published by the BC Wildlife Branch called "An Examination of the Reasons for the Decrease in Hunting Licence Sales." The author, Roger Reid, documented most of the same conclusions that I reached. I think you'll find that we have a lot in common.

Area

Washington is the smallest of the 11 western states, with about 43.6 million acres. That makes us 20% smaller than the State of Idaho; less than half as big as the State of Montana; certainly smaller than the State of California; and a lot smaller than any of the Canadian provinces.

Population

In the period 1960-85, the State of Washington experienced substantial population growth--we grew by about a million people from 1960 to 1975 and then another million people from 1975 to 1985. Between 1970 and 1980, the population in the State of Washington grew about 22%, about twice as much as the population in the United States as a whole grew (11%).

Washington has the second highest population density in the United States, at 62 people per square mile--more than twice the population density of Colorado or Oregon, which are tied for third place, and certainly a lot more than the rest of the western states, which are a lot bigger. Population projections indicate that we will continue to grow at a rapid rate and will stay ahead of every state except California.

Hunter density

Washington has the highest density of hunters per square mile of any of the 11 western states. We've had a decline in our hunting licence sales. We are now tied with Oregon with about four hunters per square mile. However, because Washington is so small, and because we have three major national parks, several large Indian reservations, and a lot of private land closed to hunting, all those people out there hunting on the same day will bump into each other.

Freshwater anglers

We don't know exactly the total water surface acreage in Washington, but we do know that we're servicing the second highest number of freshwater anglers of the 11 western states.

Appreciative wildlife use

Besides hunting and fishing, there is appreciative wildlife use, or perhaps I should say non-consumptive use, because hunters appreciate wildlife as much as non-hunters do. In 1980, we had about 3.1 million people who were primary and secondary non-consumptive users of wildlife, or about 83% of the adult population. About 1.5 million or 41% of the adult population are primary users. The preliminary figures from 1985 indicate that we have about 2.6 million primary users, which is well over 50% of our population.

I'll use some State of Washington examples to illustrate the difference between primary and secondary users. If you stop by the Skagit River and happen to see an eagle while driving up to Mount Vernon to visit your grandmother for Thanksgiving, you are a secondary user. If you get in your car and drive to the Skagit River to look at eagles, you are a primary user.

Public vs. private land

Where do all these people who appreciate wildlife go to do their thing? The State of Washington has less than 40% of the public land of many of the other western states. So we really don't have a lot of land out there for all those people to do their thing for free.

Participation rates

What does all this mean in terms of the rate at which people participate in hunting and fishing? (I lumped hunting and fishing together for this particular example.) Wyoming has the highest participation rate. Washington is about in the middle. California, the most densely populated state, has the lowest participation rate at 21%--only about 2% of California's population hunts now. There is a bit of an anomaly in New Mexico, Nevada, and Arizona, because those are low-density states in terms of population, yet they have low participation rates.

Let's examine the relationship between the percentage of the population that hunts or fishes and the number of people per square mile in the individual states. The relationship is significant for Washington, with a correlation coefficient of about 0.7. However, three states fall outside the curve--Arizona, New Mexico, and Nevada. Why should that be? These states happen to be the three southwest desert states. They don't have very much water, so there isn't much of an opportunity to fish, and they can't have very many anglers. They also have some other things in common. Deserts are much less productive for wildlife than are wetter areas, such as Washington and British Columbia. Arizona's good productive deer range is about half as productive as ours, just because it's so dry. As a consequence, all three states have limited entry to big game hunting. There's another important factor that we need to recognize. Most of the people in those three states live in Phoenix, Albuquerque, Reno, and Las Vegas. So these three states are relatively empty except for four major population centres. It is well known that rural people participate in hunting and fishing at much higher rates than do urban people.

There was a study done with data from the 1980 National Survey of Hunting, Fishing and Wildlife-associated Recreation titled "Dynamic Aspects of the Sport Hunting Population." The study determined which factors best predicted the drop-out rate from hunting. The variable that best predicted drop-out rate from hunting in their regression model was the percentage of the population that lived in a standard metropolitan statistical area (SMSA, or big city). More than 80% of the people in Washington happen to live in the nine SMSAs in our state.

Effects of urbanization

Loss of habitat and access

One of the obvious effects of urbanization is loss of habitat. One of the biggest problems we have is the expansion of what's called "exurbia"--a lot of urban people want their own little place in the country, so they go out and buy five acres, plunk a trailer down on the land, and put a fence around it. Then they put up a big sign that says "no hunting, no fishing, no camping, and no trespassing," so you lose a production area as well as access to the places where you used to be able to go hunting and fishing. To find a place to go hunting you have to travel farther to get past all that development, and when you get there it's already crowded with people who are hunting or fishing. The National Shooting Sports Foundation, funded by the Firearms Industry, was worried about the fact that firearms sales were collapsing, so they did a survey in 1985 to find out why there was a decline in hunting licence sales. They found that the two biggest problems confronting hunters were lack of access and crowded hunting areas.

Rural vs. urban culture

Why do rural people hunt and fish more than urban people? One reason is the growth in single-parent families, which are almost always headed by the mother who cannot teach her kids how to hunt or fish because she does not know how. Besides, most single-parent families are poor and cannot afford to hunt or fish.

Culturally, people in the city do city things and don't know how to hunt or fish, or even where to go. Furthermore, there is tremendous competition for recreation time and money in a city. Think of all of the kinds of recreation that are available to urban people today that didn't exist 20 years ago: satellite and cable television, computer games and home computers, health clubs, tennis, jogging, and the fitness craze. The Seattle Supersonics had a play-off game on the opening day of our lowland lakes trout season in 1979. I was working in the field checking trout anglers that day, and by 10 o'clock in the morning I didn't have anybody else to check. I asked the few remaining people where everybody was, and they said, "Home watching the Supersonics." Urban people no longer have to travel long distances for their recreation, only to find crowded conditions when they get there.

Fear of guns

There exists a tremendous fear of crime associated with guns. Our retired Deputy Director, who had been a hunter all his life, wanted to show one of his relatives this fancy gun he had. When he brought it into the livingroom to show it to the relative, everybody else cleared out of the room. They didn't want to be around that gun. Now how are you going to recruit new hunters from a population with that kind of an attitude about guns?

Participation by age group

I put together a hypothetical graph based upon data that I got from several sources to illustrate the ages at which people participate in hunting or fishing. Generally, kids begin to hunt or fish at about 10 years of age. Their interest peaks at 12-15 years of age. Kids in high school and college aren't interested in hunting and fishing, preferring instead to socialize with their peers. When they graduate, participation increases, and we get a peak in the 25- to 35-year age group. This is probably because they are in good physical shape, plus they've got a job and for the first time have some discretionary money and can afford to hunt or fish on their own. (I'm talking mostly about men, but only 13% of our hunters and only 20% of our anglers are women, so I'm not being sexist. Hunting and fishing are male-dominated sports.) After we get to the 35-year age category, we get a drop in participation. At about 40 or 45 years of age, there is an extra drop--a study in Michigan explained that this is about the age when the father's son is going to high school or college, and when the kid quits going, the father quits going. There is a little peak at 62-65 years of age--as people retire, some of them start participating again. But then the people die, so obviously the numbers drop off again.

The biggest single segment of our society today is the baby boomers, who right now are about 28-42 years old. So the majority of our population, or at least the single biggest age group of our population, is on the part of the graph that's going downhill. We could have predicted a decline in hunting and fishing licence sales from this single variable alone. As well, people who were hunting back in the 25- to 35-year age group are now simply observing wildlife in the 35- to 45-year age group. They've stopped hunting and are now non-consumptive users.

Market segmentation

If you head a corporation, how do you deal with these changes? You all know about Levis jeans. When the baby boomers were in the 15- to 30-year age category, they were buying lots of jeans. When they got up to the 30- to 45-year age category, their bodies changed and Levis didn't fit anymore. So Levis changed its product. I ask you, what have we done to provide our customers with more room in the seat and thigh? I'll give you some examples from business.

Recreational Equipment Incorporated (REI), the big co-op in Seattle, used to specialize in selling mountain-climbing gear. Now it specializes in fancy, fashionable sport clothing, because that's where the money is. All those people who were climbing mountains when they were 20-35 years old are not doing it anymore, because of the danger, the physical difficulty, whatever.

What does an industry do when that kind of thing happens to it? A product life cycle starts when a product is invented. Sales go through a natural growth phase because there's a demand out there, if the product has been properly targetted. Eventually product maturity is reached. Beyond that, there is not going to be any natural growth unless you have market segmentation. Look at the motorcycle industry. Comparisons here are valuable to us, because the motorcycle industry targets many of the same people--young adult males and not-so-adult males. The motorcycle industry collapsed in the early 1980s for the same demographic and economic reasons that the hunting industry collapsed. So what happened? If you went to a dealer six or eight years ago, you'd find one 750. Today you would find a Sports 750, a Cruiser 750, a Touring 750--market segmentation. The industry no longer had natural growth, so it targetted specialized segments of the market and specialized its product to fit that segment.

Who have we got out there today? We have bow hunters raising a stink, muzzle loaders who want their own special seasons, bass fishermen who want special regulations for bass fishing, and fly fishermen who want special regulations for fly fishing. Our customers have segmented our market for us. We have gone down kicking and screaming saying we don't want that.

Loss of habitat

Forest lands

Because you are wildlife professionals, I don't have to convince you that we're losing wildlife habitat. At least 16% of our original forest land in western Washington has been converted to other uses, and at least 19% in eastern Washington. Ninety-one percent of the original old growth in the State of Washington has been cut. I've been told that those are extremely conservative figures.

Wetlands

Wetlands are one of our most critical habitats. They are one of the most productive habitat types on the face of the earth, and we are doing everything we can to get rid of them because they consist of marshland and mudflats. There are 2300 miles of marine shoreline wetlands in the State of Washington--89% are privately owned and probably have been built on. Of all the estuarine environments, 50% are moderately modified and 37% severely modified. Here are some examples showing you the acreages. Only 10% of the wetland marshes in the Snohomish estuary are still there. The Skagit River delta is farmland now. Puyallup and Duwamish estuaries--the Port of Seattle and the Port of Takoma--are 100% modified. Not only are they not habitat, but now they are heavily polluted and toxic to most wildlife. We are also losing many riparian and riverine habitats; I won't waste your time with all the data.

Fishing licences

The second part of this presentation involves regression models to predict sales of fishing and hunting licences. We'll deal with fishing licences first. If you plot the total number of fishing licences sold against fiscal year, you will see a general increase in number of licences sold. The three variables that best predict fishing licence sales are personal income, price of gasoline, and price of the licence. Personal income is by far the most important variable predicting sales. Price of gasoline is the second most important. The price of the licence is the least significant. In some years a price increase seems to have an effect, and in other years it has very little effect. If you look at the total number of fishing licences sold with respect to the total number of people in the state, the graph starts to bend over, indicating that recruitment is starting to fall off.

Hunting licences

We have 25 years of data, and the graph plotting the total number of hunting licences sold against time is absolutely flat for all 25 years. We haven't increased our sales at all. We have gone from a high of about 225 000 licences sold to a low of about 192 000, averaging about 208 000. In the last three or four years, the curve drops clear off the chart. The factors that best predict hunting licence sales are unemployment and the price of all fees. The price of the hunting licence itself is not all that important because you can't hunt anything with just a hunting licence--you also have to have a deer tag or an elk tag or an upland bird stamp or a duck stamp. You must consider the number of deer tags sold and the number of upland bird permits sold as well. Those of you who are statisticians know that r^2 is the quality of the prediction of the model, the percentage of variation that is explained by the model. When I add unemployment, deer tags, and upland bird permits together, the r^2 of this model is 98.6. In other words, I've explained almost 99% of the variation in hunting licence sales with those three variables. The recruitment curve for hunting licence sales doesn't predict anything.

Combination licences

In our state, you can buy a combination licence, which allows you to hunt and fish. The sales graph for this licence is a combination of the hunting and fishing licence graphs. Wages and salaries are the single most important predictor for combination licence sales. The price of gasoline is the second most important. The price of all fees is the third most important. Again, recruitment is falling off.

Economic factors

For each of the three models, the single most important variable predicting the sale of the licence is an economic factor. These variables are personal income for fishing licences, wages and salaries for combination licences, and unemployment for hunting licences. In the State of Washington, we had a recession that hit harder and lasted longer than our national recession. It had a major influence on our sales of licences. In fact, we still have high unemployment in two sectors--timber and agriculture. The people normally employed in these sectors are people in rural areas, where we have a disproportionately high percentage of participation in hunting and fishing. So the downturn in the economy hit us hard.

National licence sales

Fishing licences

Let's take a look at national fishing licence sales. If you plot the total number of fishing licences sold in the United States--as reported to the US Fish and Wildlife Service--against time, you will notice that from about 1960 to about 1975 the curve shows a steady, constant growth. Around 1975, the curve starts to come back down--sales are still increasing, but not anywhere near as fast as they were.

By comparison, in the State of Washington our sales managed to grow about five years longer, until about 1980, when sales dropped. We have just started to recover over the last three years. A graph showing the percentage of our population aged 10 and above that hunts, over time, indicates that less than 7% of our population now hunts. If you owned a business and your people presented this graph to you at your annual sales meeting and said, "This is our market share," what would you do? You would either sell your business to the nearest buyer or file for bankruptcy, because you aren't going to stay in business with that kind of sales curve.

Hunting licences

I also took the total number of hunting licences sold in the United States--as reported to the US Fish and Wildlife Service--and graphed them over time. We had a little drop at the time of the oil embargo, but when we recovered from that we continued to grow until about 1975. Now the curve is absolutely flat. We've not had an increase in the number of hunters in the United States since 1975.

By comparison, if we plot hunting plus combination licences together over time for the State of Washington, the curve fluctuates quite a bit. We hit a peak about 1980, got hit by the recession, and then the curve started downwards. We have not seen that number of hunters since sometime in the 1940s. I think we are in trouble.

Conclusions

What I want you to understand is that there are two kinds of variables that influence fishing and hunting licence sales: those that influence the overall shape--e.g., loss of habitat, loss of access, loss of opportunity, and changing cultural values; and those that cause the year-to-year fluctuations (which are the things that we usually tend to focus on and sometimes have control over)--e.g., economic factors, wildlife populations, seasons, regulations, and weather during critical time periods. By the way, we also notice changes in the licence sales based on changes in our management regulations, such as changes of the opening day of a season.

The key thing for you to remember is that there are really two kinds of factors involved. Figure out the things that you can do something about and start doing something about them, and figure out the things that you can't do anything about and figure out how you are going to live with them, because that is the kind of business we are in.

MEASURING THE DEMAND FOR NON-HUNTING USES OF WILDLIFE

F.L. Filion
E. Duwors
Canadian Wildlife Service

Introduction

In this presentation, I will attempt to provide a few insights on the subjects of non-hunting uses of wildlife in Canada. This topic is one of several important concerns that conservationists need to bear in mind when assessing whether or not the current direction of wildlife management in this country is outdated. I will address the topic by raising several questions about non-hunting uses and conclude by commenting on potential management implications stemming from their answers. During the presentation, I will introduce a recommendation for consideration by the various working groups created to update the Guidelines for a Wildlife Policy in Canada so that they may better integrate environment/economy considerations and show a clearer linkage between wildlife management and "sustainable development."

What do we mean by non-hunting uses of wildlife?

One way of answering the question is to take a moment to reflect on the various ways in which wildlife populations and habitats can be used by people. A list of these uses is shown in Figure 1, which groups them under three main headings: consumptive (hunting), non-consumptive (non-hunting), and cultural-psychological. Examples for both hunting and non-hunting activities involve direct sensory contact with wildlife. For our purposes I will concentrate on the non-consumptive/non-hunting family of uses, which is quite broad. It includes a range of subsistence uses, commercial uses, recreational and touristic uses, as well as scientific and ecological uses. Cultural-psychological interactions with wildlife could be considered as another form of non-hunting use, in which the physical presence of wildlife is not always mandatory. These uses include states of mind or vital social heritages that depend on the existence of wildlife.

Several distinct messages emerge from the figure:

(1) Non-hunting uses are surprisingly diverse.

(2) Unique socio-economic benefits correspond to each type of use, which not all senior decision makers fully appreciate.

(3) Subsistence, commercial, recreational, scientific, and cultural types of uses draw publics that may be very different but not necessarily mutually exclusive.

These messages lead us to the next question, which may be the most important one that I will be asking.

CONSUMPTIVE USES

- Subsistence: meat, clothing . . .
- Commercial: trapping, game ranching, taxidermy, meat processing, eggs, furs, ornaments . . .
- Recreational: hunt, collect insects, trophies . . .
- Scientific: bio-indicators, medical research, museum specimens . . .

NON-CONSUMPTIVE USES

- Subsistence: eggs, catch and retrieve food, locate food, clothing . . .
- Commercial: films, pet trade, down, zoos . . .
- Recreational:
  - Purposeful: trips or safaris taken primarily to appreciate wildlife . . .
  - Incidental: wildlife enjoyed on trip taken for another purpose . . .
  - Other: domesticated for companionship or status symbols, inspiration for art . . .
- Scientific: education, animal studies, bio-indicators, genetics . . .
- Ecological: pollination, pest control . . .

CULTURAL/PSYCHOLOGICAL USES

- Way of life: cultural identity, social cohesion, arts and crafts, animism, symbols . . .
- Optional: option to use or benefit from wildlife in future . . .
- Existence: knowing that wildlife exists or that it has been preserved from extinction . . .

Figure 1. Classification of wildlife uses that benefit humans (adapted from Filion 1984).

Why should managers be interested in non-hunting uses?

I will attempt to answer this question by advancing the notion that wildlife management programs are incomplete and lack political clout unless they fulfill at least two important roles. These roles are illustrated in Figure 2.

Stress-response approach

The first vital role is shown by the stippled area at the top of the figure. Here wildlife management programs are seen as being sensitive to the needs of wildlife populations and habitat. This is reflected by a strong preoccupation with stress factors that affect those resources. The principal aim of this role is to sustain wildlife populations, some of which are endangered, by mitigating stress. According to this role, hunting and non-hunting utilization may be

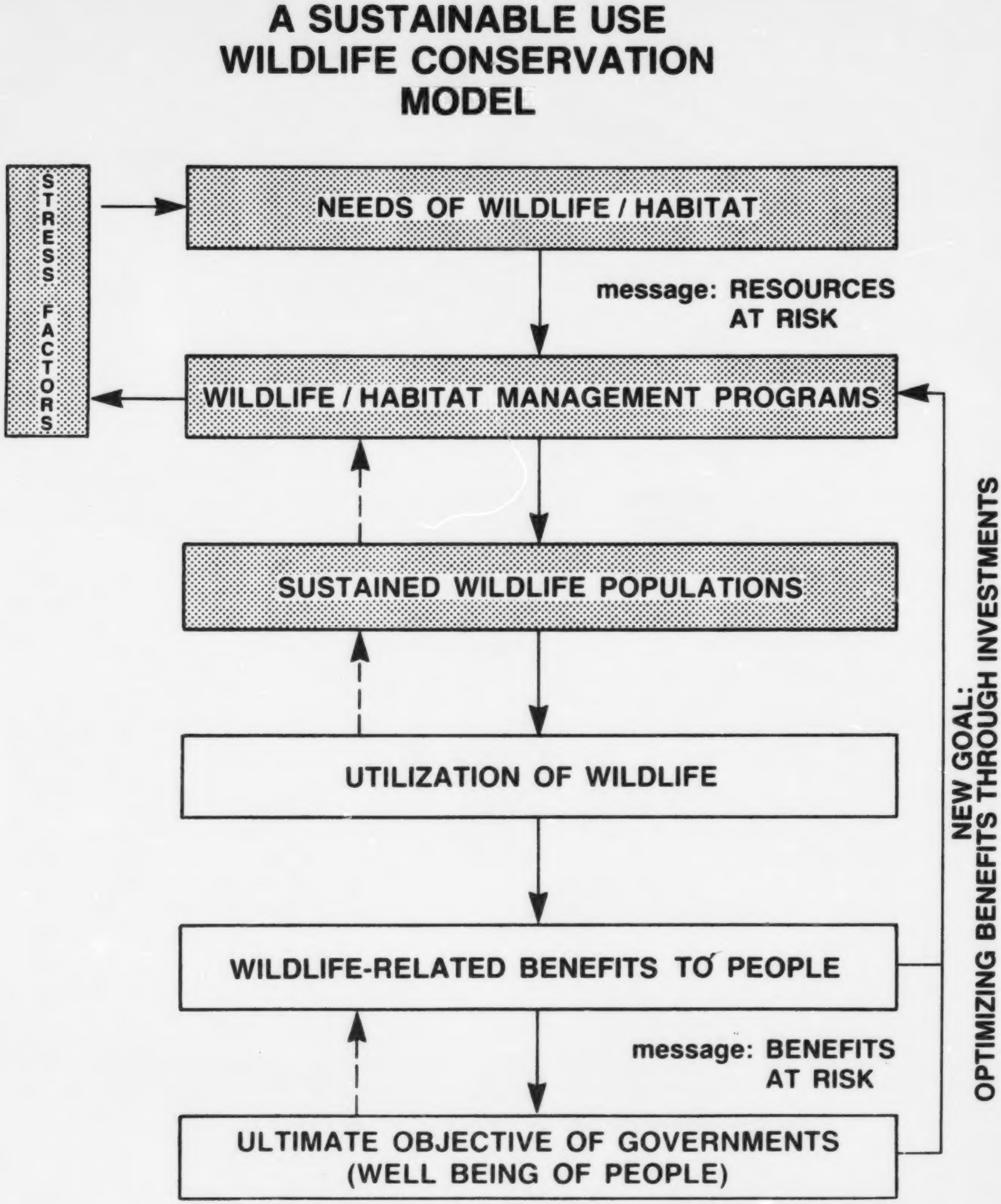

A SUSTAINABLE USE WILDLIFE CONSERVATION MODEL
STRESS FACTORS
NEEDS OF WILDLIFE / HABITAT
message: RESOURCES AT RISK
WILDLIFE / HABITAT MANAGEMENT PROGRAMS
SUSTAINED WILDLIFE POPULATIONS
UTILIZATION OF WILDLIFE
WILDLIFE-RELATED BENEFITS TO PEOPLE
message: BENEFITS AT RISK
ULTIMATE OBJECTIVE OF GOVERNMENTS (WELL BEING OF PEOPLE)
NEW GOAL: OPTIMIZING BENEFITS THROUGH INVESTMENTS

Figure 2. A sustainable-use wildlife conservation model.

perceived as a source of stress on wildlife, and managers may spend considerable effort prohibiting poaching or regulating these uses in other ways.

When it takes the first role, wildlife management may best be described as a stress-response approach. This is because some managers may tend to perceive human activities such as wildlife utilization or industrial development as significant threats to wildlife and its habitat. The main message or argument that managers have to defend or promote conservation is the fact that wildlife and habitat resources are at risk. The stress-response approach to wildlife management is a very important one and is responsible for much of the essential environmental impact assessment work that gets done today. It is ideally suited for managing hunting and poaching, which at times have been known to place severe stress on wildlife populations. In today's world, however, it is becoming increasingly difficult to justify the costs of management programs exclusively in terms of this fundamental role. Politicians, senior decision makers, and business people may perceive this role as being reactive and defensive, anti-development, and perhaps even insensitive to the well-being of people and the economy. Allowing senior decision makers to perceive wildlife management programs exclusively in terms of the needs of wildlife, in defensive terms, can at times be detrimental to conservation.

Socio-economic benefits

Hence, a second complementary role of management is required, a role that shows not only that conservation is sensitive to the well-being of people and the economy, but that wildlife management makes significant, direct contributions towards them. This is illustrated in white in the lower part of Figure 2, which shows that, when wildlife populations and habitats are successfully maintained, sustainable human utilization is made possible; that important socio-economic benefits result from utilization; and that these socio-economic benefits contribute directly towards the well-being of society and the ultimate socio-economic objectives of governments.

One of the key messages that emerges from this second role is that significant socio-economic benefits may be at risk if the vital needs of wildlife populations and habitat are not met. In other words, by providing for the needs of wildlife and habitat, managers can ensure the sustainable utilization of species. Further, given adequately funded programs, wildlife-related benefits to people can be sustained in perpetuity--a claim that few, if any, commercial or industrial development proposals can make. This second role is an essential one in defending existing wildlife programs against cutbacks, in promoting new conservation initiatives on the merits of their benefits, and in justifying funding requirements. It provides strategic arguments for convincing the highest decision-making levels of government and industry that they must invest, sometimes heavily, in conservation programs that will meet substantial social and economic needs.

What does all of this have to do with measuring non-hunting activities? Socio-economic investigations have demonstrated that hunting is capable of providing considerable benefits to participants, rural communities, and the economy at large. However, it would seem short-sighted for managers to restrict their socio-economic arguments to hunting utilization alone. The force of their arguments could be increased significantly by including the benefits from non-hunting utilization in demonstrating the worth of conservation initiatives. The bottom line is that by managing for sustainable multiple uses (for both hunting and non-hunting utilization), considerably larger socio-economic benefits for more diverse publics occur, resulting in stronger political justifications for investments in conservation programs.

What do we know about non-hunting uses?

At a time when recreational hunting appears to be declining, non-hunting wildlife uses emerge as sizeable. Witness the more than 10 000 Canadians across the country who took the time to venture out into the snow for the 1987 Christmas Bird Count, an annual census to determine numbers and species of birds wintering in Canada, or the 20 000 birders who descend on Point Pelee National Park in southern Ontario each spring to watch the migration of songbirds.

It makes good political sense to add up all the benefits from such activities to be able to demonstrate to senior decision makers just how important it is to support and fund conservation programs. I will illustrate in the figures that follow how results from the 1981 National Survey on the Importance of Wildlife to Canadians, which identified and measured the benefits of these activities on national and provincial scales, can be utilized by managers to do this. I will also point out some implications for wildlife management of the new and different publics it is essential to take into account when managing for sustainable multiple uses.

Some of these results are drawn from analyses that have been published in survey reports (Filion _et al_. 1983, 1985), and others are new analyses just published in the report "The Importance of Wildlife to Canadians: Demand for Wildlife to 2001" (Filion _et al_. 1988).

Figure 3 shows how non-hunting uses of wildlife around the home or on special trips attract larger publics than hunting. By managing for multiple uses, including hunting and non-hunting activities, conservationists can widen their base for political support six- or sevenfold.

Figure 4 shows that significant sums are spent on recreational hunting. However, when the expenditures of participants in non-hunting activities are added to the above, the economic impacts attributable to wildlife utilization are increased fourfold, i.e., four times the contribution to the Gross Domestic Product (GDP), to jobs, and to government revenues from taxes. Economic arguments from sustainable multiple uses carry four times the weight of those based on hunting alone.

Both hunting and non-hunting uses involve human-wildlife interactions. Whereas hunting usually includes the intentional removal of birds or mammals from their natural functions in the wild, non-hunting

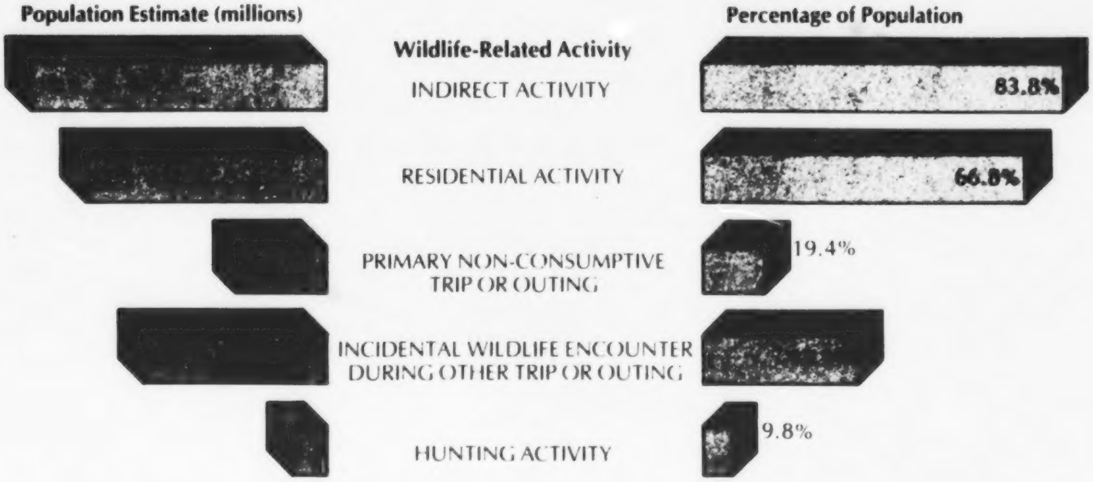
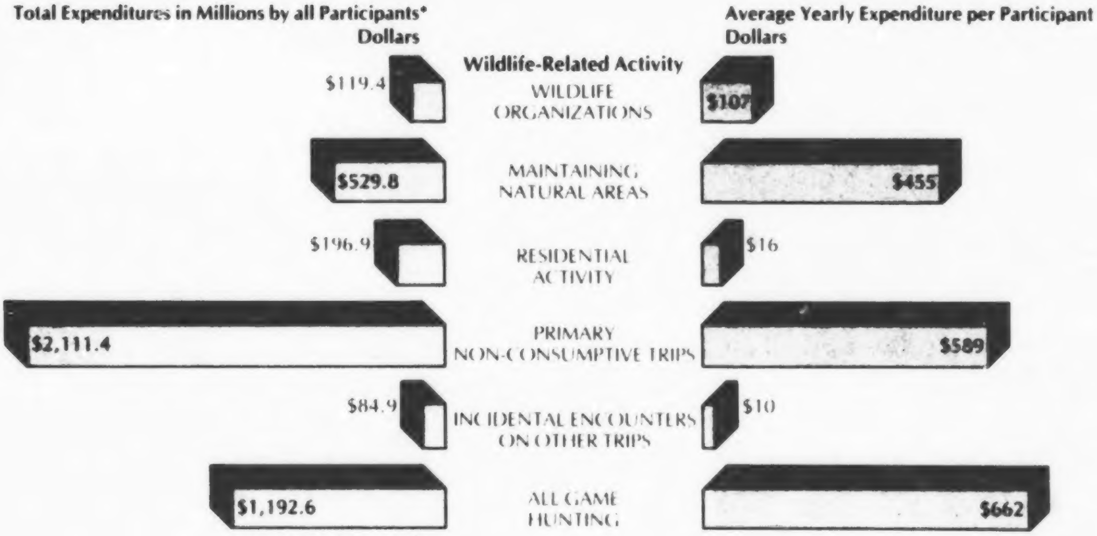


Figure 3. Number and percentage of Canadians participating in wildlife-related activities during 1981.



* Grand Total $4.2 Billion

Figure 4. Total and average expenditures by participants in wildlife-related activities in 1981.

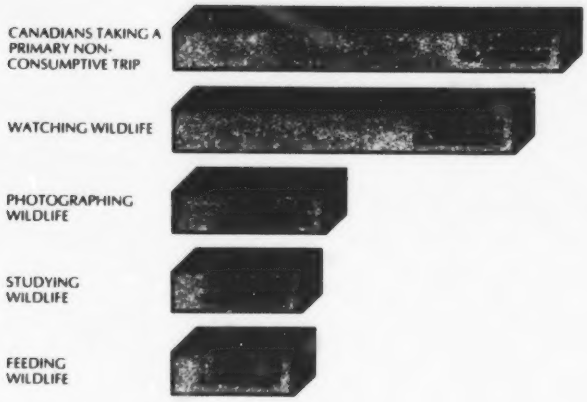


Figure 5. Number and percentage of Canadians participating in non-consumptive wildlife-related activities while on primary non-consumptive wildlife-related trips or outings in 1981.

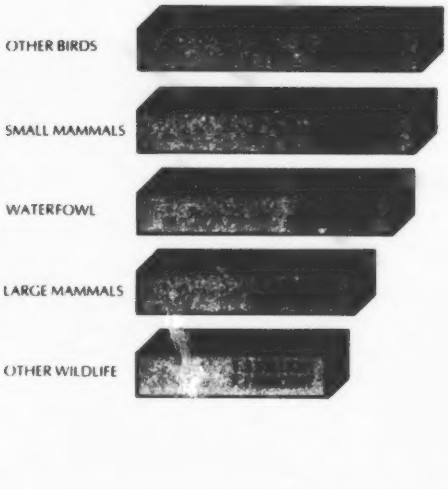


Figure 6. Number and percentage of Canadians encountering wildlife while on primary non-consumptive wildlife-related trips or outings in 1981.

interactions primarily centre on watching, photographing, studying, or feeding wildlife in its natural setting (Figure 5). Managing for sustainable multiple uses requires that both hunting and non-hunting interactions are taken into account in wildlife and habitat conservation programs.

Non-consumptive users enjoy many wildlife species, both game and non-game (Figure 6). For example, waterfowl conservation measures benefit not only the 700 000 Canadians who hunt these birds, but also the 2.2 million people who take special trips to enjoy waterfowl.

The socio-demographic characteristics of participants in non-hunting activities differ somewhat from the traditional hunting constituency. Non-consumptive users are typified by a higher proportion of females and urban residents, and by higher age and schooling levels, than hunters (Figure 7). Managing for sustainable multiple uses will involve adjustments in traditional communication programs to convey conservation messages effectively.

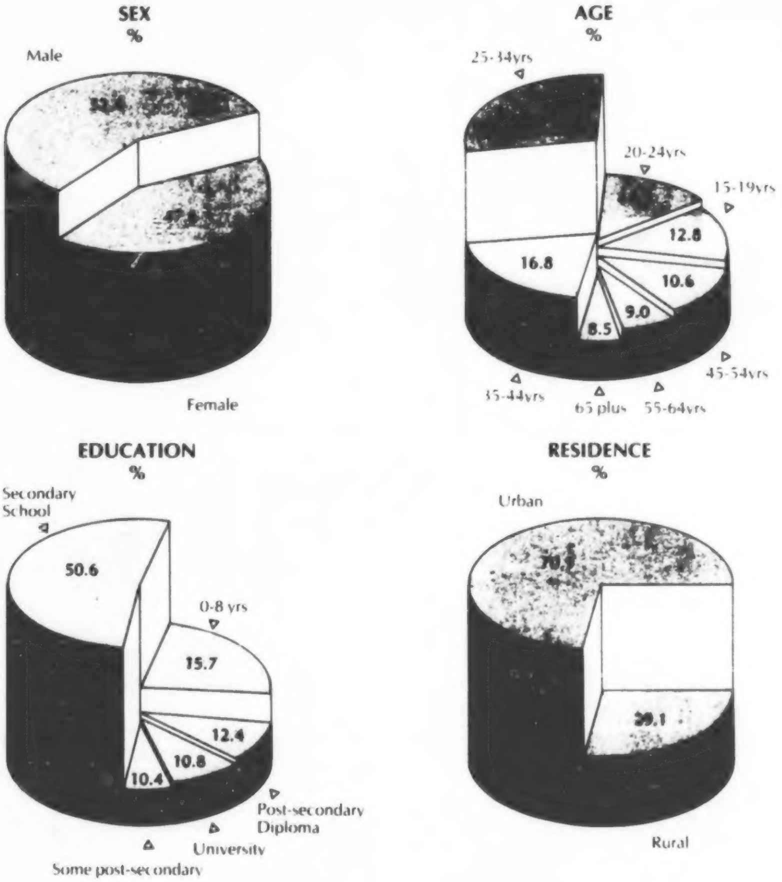


Figure 7. Profile of Canadians participating in primary non-consumptive wildlife-related trips or outings in 1981.

Wildlife conservation agencies, government and non-government, could broaden their bases of support and sources of revenue by orienting strategies toward Canadians who express interest in participating in wildlife-related activities but do not currently do so. Whereas Canadians appear satisfied with current opportunities to take part in non-consumptive activities, many do not hunt even though they would like to, and over six times as many would be prepared to join or contribute to wildlife organizations as actually do (Figure 8).

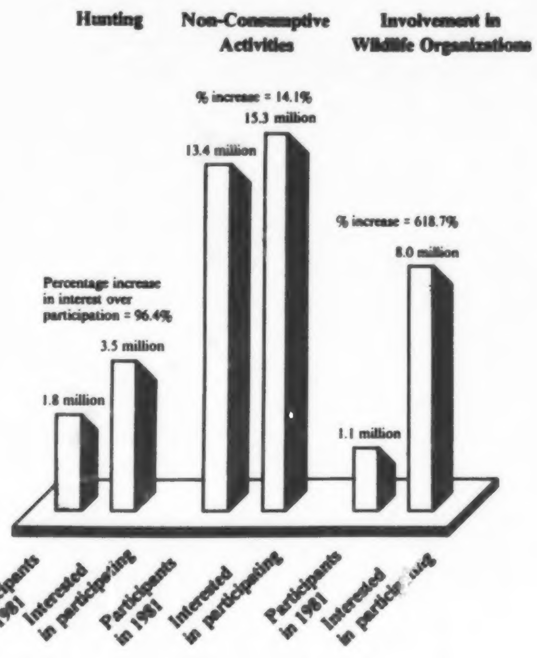


Figure 8. Difference between actual number of participants and those interested in participating in selected wildlife-related activities, Canada, 1981.

Untapped demand for hunting is highest in Prince Edward Island, Quebec, Ontario, Alberta, and British Columbia. The greatest gains for membership in wildlife organizations are likely to be made in the provinces of eastern Canada. Potential increases in the demand for non-consumptive activities were seen in Newfoundland, New Brunswick, Quebec, Manitoba, and Saskatchewan (Figure 9).

The adult Canadian population will increase by about 25% by the year 2001 (Figure 10). In 1981, those 15-24 formed the largest age group; in 2001, the largest group will be those 35-44. This expected growth and aging of the population will significantly influence participation in wildlife-related activities.

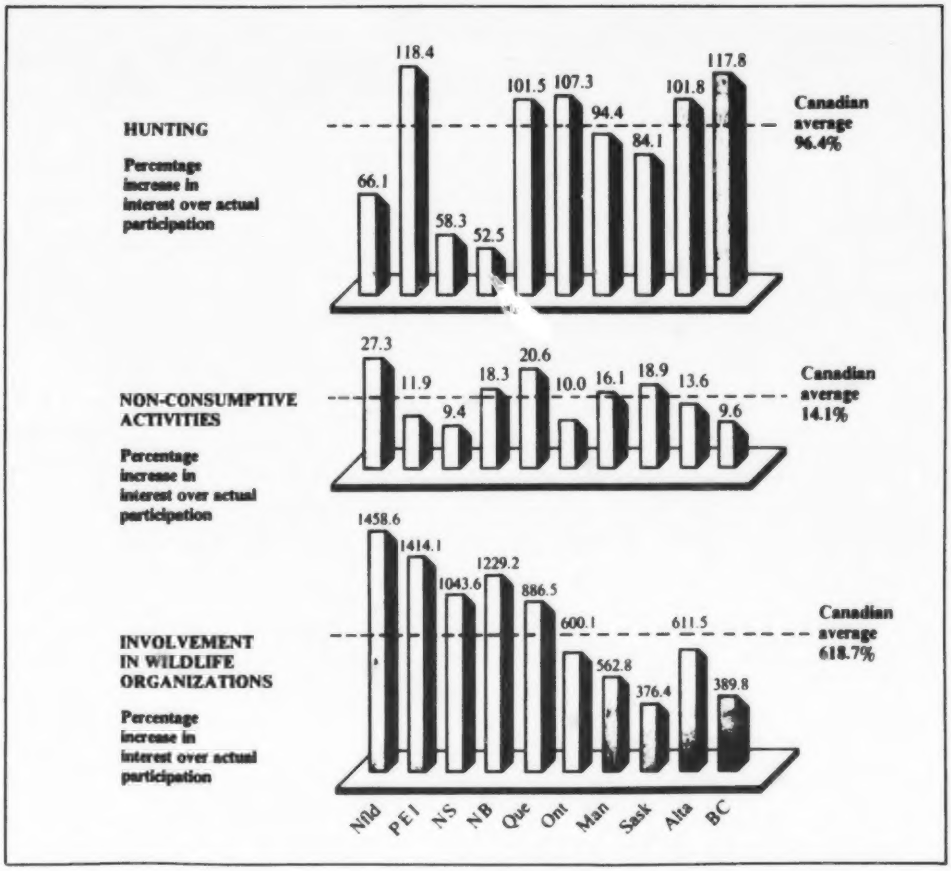


Figure 9. Difference between actual number of participants and those interested in participating in selected wildlife-related activities by province in 1981 ($\underline{N}$ = 18.5 million).

Substantial benefits may be at risk if management programs fail to anticipate emerging demand for multiple uses. Although the absolute number of hunters will likely increase by 2001, a smaller proportion of the population will actually take part in hunting (Figure 11). In contrast, involvement in non-consumptive activities and in wildlife organizations will likely keep pace with or exceed population growth, as the age group most prominent in these activities is likely to maintain this interest.

What are the implications for wildlife and habitat management?

(1) From a strategic point of view, it makes good political sense to demonstrate all the socio-economic benefits that accrue to large diverse publics from both hunting and non-hunting utilization to

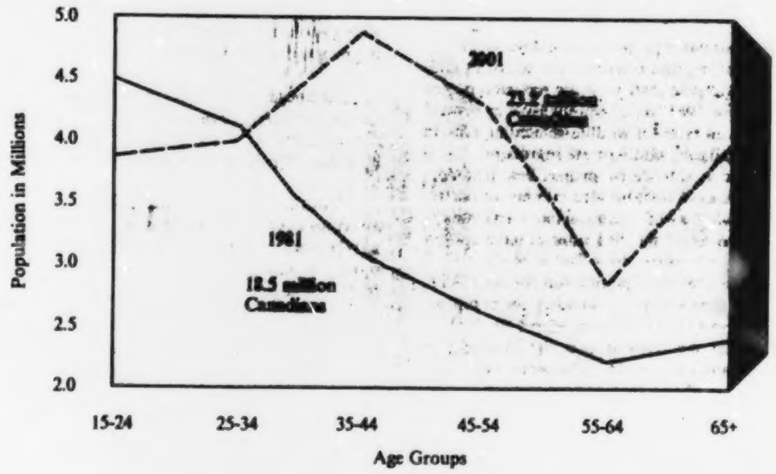


Figure 10. Distribution of the population of Canada aged 15 or older, 1981 and 2001.

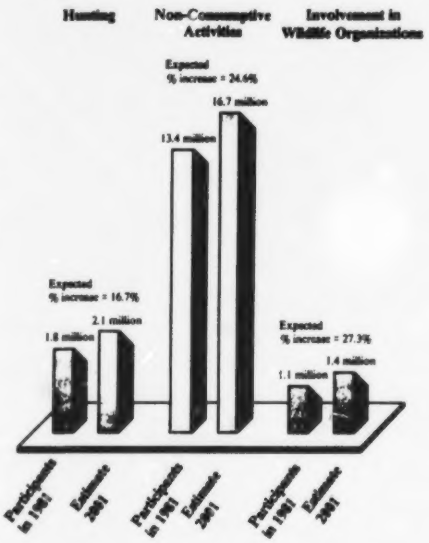


Figure 11. Estimated rates of participation in selected wildlife activities, Canada, 2001.

senior decision makers dealing with provincial, territorial, and national economic policy and rural development planning. Managing wildlife resources for sustainable multiple uses provides the diverse portfolio of arguments that wildlife managers need to defend existing programs, to justify new initiatives, and, at times, perhaps, to weather market conditions typified by cycles or shifts in demand for wildlife.

(2) Quantifying the economic impacts that result from expenditures on non-hunting uses of wildlife and pointing out the provincial and federal government revenues from taxes that result from these impacts can serve as powerful strategic arguments to secure increased government funding for wildlife conservation. According to a BC survey of non-consumptive users (Reid et al. 1986), government funding was preferred above all other options as the source for manpower and funds for non-hunting programs.

(3) Managing for non-hunting uses of wildlife and habitat will require new management styles and approaches. This is due to the differing nature of this activity's impact on resources, differences among preferred species, the differing socio-demographic profile of participants, and the fact that non-hunting demand varies in intensity from east to west.

(4) The difference between current participation and declared interest in wildlife organizations implies a significant, untapped source of support for wildlife conservation. The highest gains could be made in eastern Canada.

(5) Canada's population will have aged appreciably by 2001. Hunting will likely attract a lower proportion of the total population than at present, because hunters are most often found among younger age groups. Some non-consumptive activities may attract a growing proportion of the total population because of their compatibility with the lifestyle of an older population.

(6) Figure 12 shows that as the diversity of wildlife-related activities in which people participate increases, so does their commitment to these activities in terms of time and money spent on them. Management programs that encourage multiple uses (a mix of both hunting and non-hunting activities) would be expected to enhance this commitment and hence public support for and allies in conservation.

(7) The temptation to partition wildlife beneficiaries into "consumptive" and "non-consumptive" categories masks the fact that most users are in both categories. For example, Figure 13 demonstrates that 95% of hunters take part in non-hunting activities during the year. Many non-consumptive users also hunt. Four out of five hunters would probably welcome an expansion of wildlife management programs to meet their broader non-consumptive interests.

(8) It is imperative that we develop a comprehensive understanding of demand for wildlife among Canadians, which includes both hunting

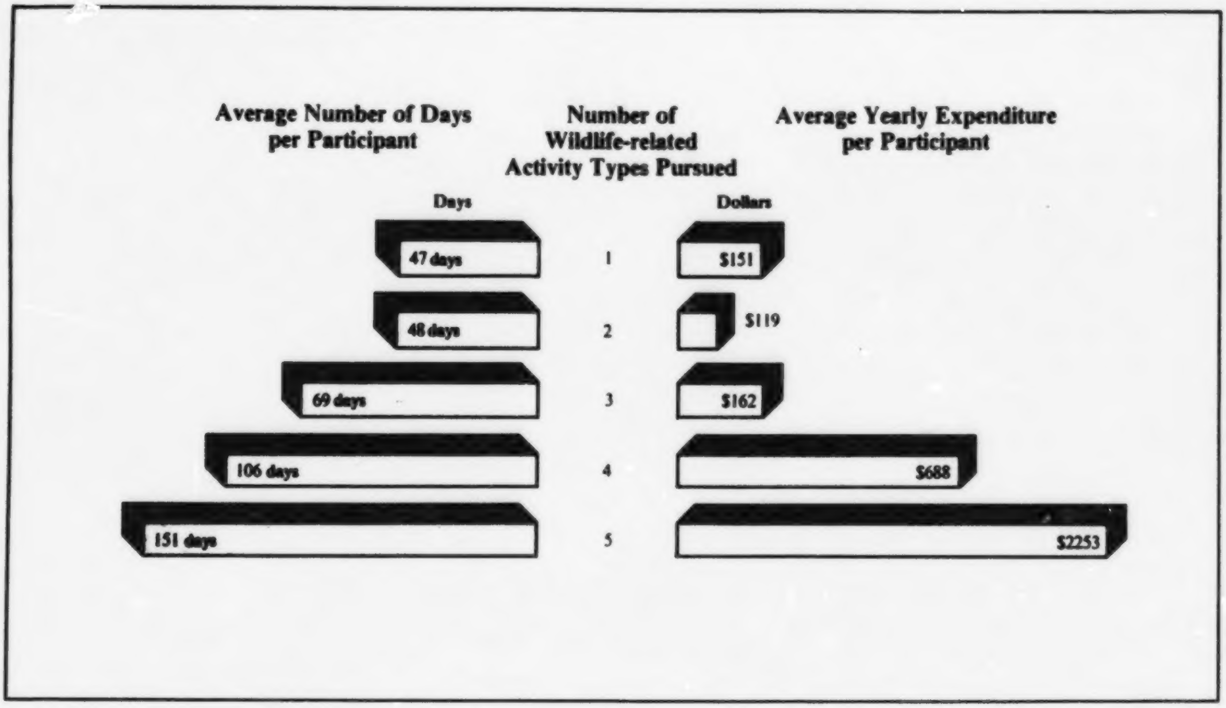


Figure 12. Average number of days and dollars spent by Canadians according to the number of different types of wildlife-related activity they took part in, Canada, 1981.

and non-hunting uses. The 1987 National Survey will contribute to this understanding by providing information for managers to monitor and anticipate shifts in use patterns and to be able to support conservation initiatives by demonstrating the substantial benefits Canadians receive from wildlife that would be lost or threatened if wildlife populations and habitat were allowed to decline. Managers could increase the strength of their arguments even more by showing the contribution to provincial economies that visitors from outside Canada make as a result of their expenditures on wildlife-related activities. Recent Tourism Canada studies indicate that wildlife experiences while in Canada are critical to the enjoyment of many foreign tourists' trips to Canada (Tourism Canada 1986, 1987). The economic benefits from these non-residents' wildlife-related activities while in Canada have not yet been quantified on a comprehensive basis.

Recommendation: Comprehensive socio-economic database

In 1987, the World Commission on Environment and Development of the United Nations (Brundtland Commission) (1987) found that wildlife issues lacked "political clout" because they were perceived largely in scientific and conservationist terms rather than as leading socio-economic concerns. In other words, the second, complementary role that I mentioned earlier is not as strong as it should be. The following recommendation will assist in resolving this problem.

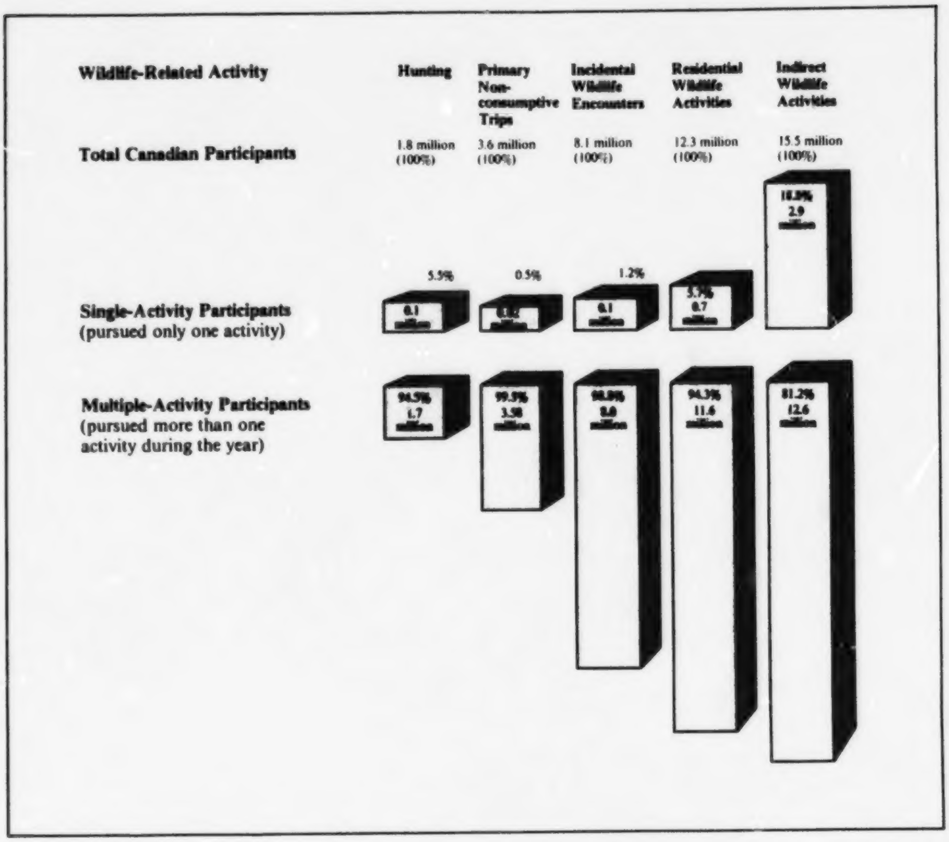
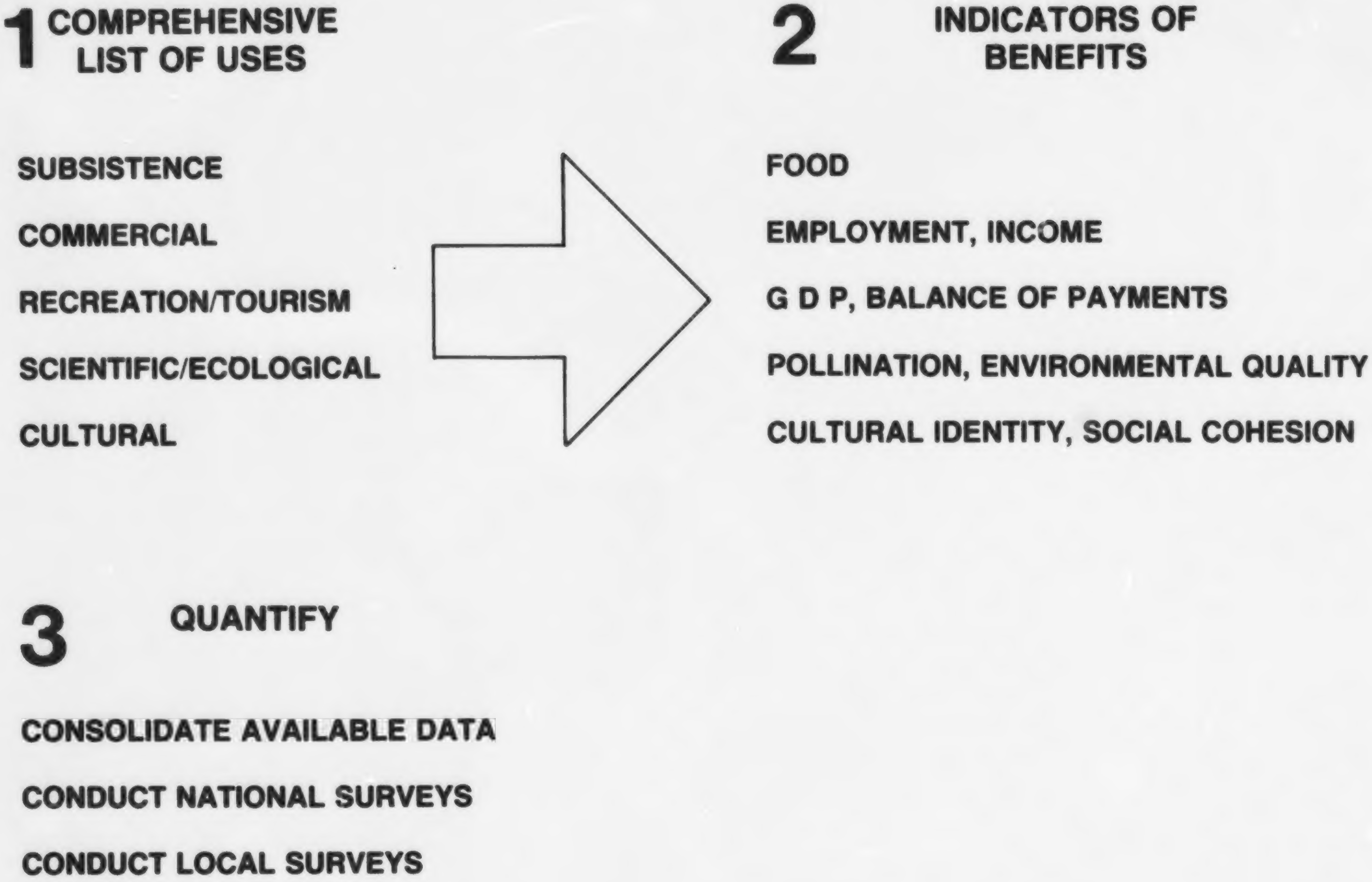


Figure 13. Participation in major types of wildlife-related activity segmented according to percentage of participants who are single-activity participants and multiple-activity participants, Canada, 1981.

I recommend that the revised Guidelines for a Wildlife Policy in Canada recognize the strategic role of a comprehensive socio-economic database on wildlife uses and values as a key element for influencing senior decision-making committees that deal with economic policy and rural development planning, and for securing additional financial support for wildlife conservation from government and non-government sources.

A comprehensive socio-economic database should encompass the multitude of wildlife uses that benefit a wide diversity of publics; should include numerous indicators of benefits from these uses; and should quantify these benefits at local, provincial, and national levels (see Figure 14 and Tables 1 and 2 following). In recognition of the multiple jurisdictions and interests that a comprehensive approach touches upon, it should also be co-operative and co-ordinated, drawing on the resources and expertise of government agencies and non-government organizations concerned with wildlife and other natural resources. This co-operative approach would increase both the efficiency and effectiveness of the knowledge base needed to manage for sustainable multiple use and enhance the availability of expert advice on using this information to increase the political clout of various conservation agencies.

CREATING A SOCIO-ECONOMIC DATA BASE



1 COMPREHENSIVE LIST OF USES

SUBSISTENCE

COMMERCIAL

RECREATION/TOURISM

SCIENTIFIC/ECOLOGICAL

CULTURAL

2 INDICATORS OF BENEFITS

FOOD

EMPLOYMENT, INCOME

G D P, BALANCE OF PAYMENTS

POLLINATION, ENVIRONMENTAL QUALITY

CULTURAL IDENTITY, SOCIAL COHESION

3 QUANTIFY

CONSOLIDATE AVAILABLE DATA

CONDUCT NATIONAL SURVEYS

CONDUCT LOCAL SURVEYS

Figure 14. Creating a socio-economic database (to be used in conjunction with examples in Tables 1 and 2).

Table 1. Examples of comprehensive human uses of wildlife and habitat for Section 1 of Figure 14.

Major use and user categories	Specific examples of uses
Subsistence	Hunting, trapping, fishing, collecting, gathering, cultivating, harvesting
Commercial	Hunting, game ranching and farming, aquaculture, processing (skins, meat, ivory), taxidermy, harvesting, handicrafts, curios, films, supplying of zoos and pet shops, fertilizers . . .
Recreational and touristic	Safaris to hunt or observe wildlife, trips to observe natural wonders and the scenic beauty of plants and landscapes by residents and non-residents
Scientific and ecological	Museum specimens, medical and genetic research, bio-indicators, environmental education, animal studies
Cultural/ psychological	Contribution of resources to the way of life of communities; option to use resources in future (optional use); knowing that resources are being preserved from extinction (existence use)

Table 2. Examples of comprehensive classification of benefits resulting from utilization of wildlife and habitat for Section 2 of Figure 14.

Major use categories	Indicators of benefits
Subsistence	Self-reliance, food, shelter, clothing, forage for livestock; monetary equivalent of these benefits . . .
Commercial	Local employment opportunities, personal income; contributions to GDP, exports, international trade and balance of payments; source of materials for local industries (handicrafts, art, food, clothing) . . .
Recreational and touristic	Direct economic benefits to residents (consumer surplus); personal enjoyment and self-esteem; economic impacts of non-resident tourists' expenditures on local and national economies (local employment, personal income, GDP, balance of payments)
Scientific and ecological	Indicators of environmental quality, enhanced knowledge, health, security through pharmaceuticals; pest, waste, and pollution control; crop pollination; monetary equivalent of these benefits . . .
Cultural/ psychological	Social cohesion of communities (spirit of self-reliance, cultural identity, social ties, symbolic and religious values of resources); willingness to pay for optional use of resources; willingness to pay for existence use of resources

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DISCUSSION

John Baird (New Brunswick Department of Natural Resources and Energy): I think that we have set the stage by recognizing the traditional and strongly held values of people regarding wildlife. We have certainly been given some information to suggest that times are changing, and we need to reflect on and decide how we should respond and how we might modify our current guidelines in Canada to account for these changes.

Martin Edwards (Royal Military College of Canada): I want to ask Jon Gilstrom, who stated that hunting was declining in the State of Washington because of alternative attractions, if the non-consumptive use of wildlife has also declined there, or is there more to it than this?

Jon Gilstrom (Washington Department of Wildlife): Non-consumptive use is definitely increasing. There is a multitude of factors causing these changes, from loss of access and opportunity to the changing social values of people and the acceptability and ready availability of non-consumptive use.

Alain Jolicoeur (Canadian Wildlife Service): Mr. Gilstrom, I think that one of your hypotheses can be challenged. You have a graph showing the number of hunters for each age category--it decreased from age 35 down to 60 and 70. From that graph you conclude that demand will sharply decrease in the future for people in the baby-boom group. I submit that most sociological studies suggest that this static situation will change and that the people in the baby-boom group will have more free time and money; therefore, if you try to plot the number of hunters by age category 20 years from now, you will find a very different curve. Therefore, the decrease in demand should not be as dramatic as what you are proposing.

Jon Gilstrom (Washington Department of Wildlife): I would agree with you to a degree. The shape of that type of graph is going to change over time. The graph I showed you happens to be based on 1980 data. I will have the 1985 data shortly, and I suspect that the graph has changed--that the peak in the 25- to 35-year age group is probably a little lower and the scale in the older age groups is probably a little higher. But we also have to recognize that, as people age, their tastes and preferences change; therefore, demand is going to decline to a degree simply because people, as they mature, are not physically fit to hunt anymore and because they prefer to do different things.

Unidentified speaker: I have a comment for Jon Gilstrom. I've noticed that people in the United States are generally more honest than we are in labeling our departments. You often call yours

Departments of Game, and we always call ours Departments of Wildlife, which gives the impression that the departments are concerned mostly with wildlife. Your presentation gave the impression that your department was concerned with the preservation of hunters. It seems to me that the mandates of these departments should be concerned with what you might call the resource--the animals, the habitats, and the ecosystems--rather than with the type of people who are using them.

I also have a question for Roy Moses from Old Crow. Do you envision that there ever might come a time when the trappers could get more money from the final product, or when they could be involved in the actual manufacture of frivolous fur garments? (In spite of the fact that my family used to trap and that I used to get some of my food from trapping, I still don't like it.) Can you think of any way in which you can get co-ops going in which you are your own furriers?

Roy Moses (Old Crow): You have to think of what is in fashion. Often supply and demand don't coincide--for example, three to five years ago lynx were not in demand, but the population was way up. You have to go with what you've got. Does that answer your question?

Unidentified speaker: Not really. I was thinking more of the economic system. Could the indigenous trappers get more involved in the manufacture of the end product? If they did, they would probably have more control over the demand, too.

Rich Goulden (Manitoba Department of Natural Resources): I would like to point out that in the United States, generally speaking, State Departments of Fish and Game operate totally upon the revenue that they derive from the sale of hunting and fishing licences. Therefore, it is significant to them as to whether those licence sales go up or down. In Canada, wildlife branches operate from revenues that are provided from the consolidated treasury. For the provinces, therefore, it doesn't really matter if licence sales go up or down in terms of our operating budget.

Nancy Erickson (Canadian Federation of Humane Societies): I would appreciate it if at some point during the Conference someone could address the issue of poaching. We are hearing more and more about this problem across the country, especially in Quebec and Alberta. I was wondering if there has been an increase in poaching in the State of Washington with the decrease in the purchase of licences. Would any wildlife managers like to comment on the situation regarding poaching and how it affects their management programs?

John Baird (New Brunswick Department of Natural Resources and Energy): We are certainly free to include the illegal use of wildlife, or poaching, in our discussions in terms of what sort of agency programs we need to mount to get the job done.

Jon Gilstrom (Washington Department of Wildlife): It's embarrassing to admit how little information we have on exactly how much poaching is going on. In our agency, a fairly high priority is to get a better understanding of exactly how much poaching is taking place. A decrease in licence sales does not necessarily mean a decrease in poaching, because there are two categories of people to be considered:

(1) rural people, who may be living off the land anyway and who buy a licence just to satisfy the game warden--they are going to hunt deer and elk even without a licence; and

(2) urban people, who can't afford to go poaching when licence sales go down due to the economy. In many cases you actually see a decline in poaching, because many of the people who otherwise might can't afford to.

Eldon Hawton (Wildlife Conservation and Fur Marketing Federation): I'd like to address a question to Jon Gilstrom. In your presentation, you made reference to the loss of habitat as being one of the major reasons hunting has declined. What about the loss of wildlife populations? Could your licence sales have declined because there was nothing there to hunt?

Jon Gilstrom (Washington Department of Wildlife): If you look at my data on certain species, particularly deer and elk, it is clear that the "good old days" were back in the '50s and '60s. Hunting is definitely not as good as it used to be, and loss of wildlife populations is certainly a contributing factor. However, it's important not to focus on any one factor but to recognize the other factors that are important if you're going to have a comprehensive program.

Jim Walker (BC Wildlife Branch): We wrote a report in which we tried to separate the factors into the things we could do something about and the ones that were beyond our control. I would like to know, as a management agency, what the State of Washington did. Did it try to get the hunters back by some modification of its licencing, managing, or qualifications? Or was there any action at all to get the hunters back?

Jon Gilstrom (Washington Department of Wildlife): I would like to point out that fish and wildlife folks are a fairly conservative lot --they like to hang on to things the way they used to be. It's hard for us sometimes to recognize all the significant changes that are going on. The whole point of my speech was that we have this major transition going on in our culture and our society and that we must acknowledge and accept the fact that hunting is playing a less significant role in our society. Even if we would really like to preserve hunting in our culture, it's going to be difficult to do with the current decline that we've observed. We are definitely going to have to change our perspectives about wildlife in the future. Much of that future is going to be spent protecting habitat, restoring declining or endangered populations, and satisfying the demand from a broader constituency.

Session 2: "Is current wildlife management relevant?" (1)

INTRODUCTION OF PANEL AND OPENING REMARKS

H.A. (Tony) Clarke
Director General
Canadian Wildlife Service

I am looking forward to a very interesting and stimulating discussion in this session, as some people speaking here today have different points of view from most of us in this room.

Before we start, I would like to say that I very much like the direction in which this Conference is moving. Because governments are into a much more open process, there is a lot more dialogue, public input, and public participation. I hope that this Conference will continue to improve and bring together a broader spectrum of wildlife, people, and groups that have an interest in wildlife.

Our topic at this session is, "Is current wildlife management relevant?" The first speaker is Michael O'Sullivan, who is a Field Representative of the World Society for the Protection of Animals. I first met Michael last year at the Convention on International Trade in Endangered Species (CITES) Conference in Ottawa. Michael will be giving us his views on the "Non-use of wildlife," under the subtheme: "How do we factor in the full range of uses of wildlife?" Our second speaker will be Robert Hudson, who is a Professor in the Department of Animal Science, University of Alberta. He is going to be speaking on the "Commercial use of wildlife," also under this subtheme.

Our second subtheme is, "Is there too much emphasis on the consumptive use of wildlife?" One of the speakers on this subtheme is a "bird-watcher," and the other is a "trapper." The third speaker will be Martin Edwards, who is a Professor of Physics at the Royal Military College of Canada. Martin is an avid bird-watcher, and he is going to speak in support of non-consumptive use. The next speaker is Corky Peterson, who is Education Co-ordinator with the Manitoba Registered Trappers' Association. He will speak in support of consumptive use. He is a fine consumptive fisherman, among other things.

Our fifth speaker will be Professor Val Geist, Faculty of Environmental Design, University of Calgary. He's going to be speaking on "What is the prognosis of wildlife on the common, or is wildlife a diminishing resource?"

Our final speaker will be Garnet Anthony, CBC Radio, Edmonton. He is going to address the topic, "Does public perception reflect these realities--is it getting accurate information?"

"HOW DO WE FACTOR IN THE FULL RANGE OF USES OF WILDLIFE?": NON-USE OF WILDLIFE

Michael O'Sullivan
Field Representative
World Society for the Protection of Animals

The fundamental concept of current wildlife management programs is that wildlife exists to be exploited by people. We do not believe that wildlife management is a science in the traditional sense of the word, such as physics or mathematics. We believe, instead, that it's a system based upon an applied philosophy that animals should be exploited for a wide range of human interests. This practice is based upon, in our view, a biased political opinion, and not upon scientific law. Wildlife in the main, in this country and abroad, is regarded as a "use of a harvestable, renewable resource." It is also interesting to note that that opinion in Canada is, if government polls are any indication, a minority view.

In 1982, Environment Canada released a study that was carried out the preceding year by Statistics Canada. The purpose of the study was to gauge the attitudes of about 100 000 Canadians from all walks of life across the country on their attitudes towards wildlife and the importance of wildlife to them. The results showed that an overwhelming 82.8% of Canadians supported the non-consumptive use of wildlife. Approximately 26.2% supported the consumptive use of wildlife.

In 1986, the Royal Commission on Seals and Sealing in Canada also released public opinion polls with surprising results. The Commission concluded that, based on a wide range of public opinions, there were four primary criteria that the public had to feel were fulfilled in order to accept the killing of wildlife:

(1) that the method should be relatively humane;

(2) that it should be for a useful purpose;

(3) that it should not endanger the species; and

(4) that there should be a minimum of waste.

We would respectfully suggest that wildlife management, as it is currently practised in Canada, does not fulfill those criteria, and that there is clearly a fundamental conflict between economic interests and humanitarian concerns.

World Society for the Protection of Animals

Perhaps it would be useful to digress and describe our organization. The World Society for the Protection of Animals (WSPA) is headquartered in London, England, with offices in different parts of the world. We have more than 360 member societies in over 60 countries. As the name of our organization suggests, the programs encompass protection for wildlife, domestic pets, laboratory animals, and livestock. We are the only organization of its kind that is recognized by, and has consultative status with, the United Nations. I think it is also important to point out some of the differences, because people do confuse us with other organizations. I'm sure that the organizations that I'm about to mention will feel relieved that I'm pointing out the differences between them and WSPA. Representatives from the Canadian Wildlife Federation were recently in the United States speaking to a conference there encouraging the repeal of the Marine Mammal Protection Act in the United States. That is not a position that WSPA would support. A fur trade journal, in January of this year, reported that the office of the World Wildlife Fund in Finland accepted $100 000 from an auction of mink and fox pelts from the fur trade. That is also something that WSPA would not support.

Influence of trappers and hunters on wildlife management agencies

Historically, wildlife management agencies have acted as closed corporations responding to a narrowly based and very highly specialized constituency of both trappers and hunters. Therefore, the decision-making process is not the pure scientific exercise you might have expected of biologists. Animal welfare agencies complain that wildlife management authorities are providers rather than protectors of wildlife. The majority of government wildlife managers see their mission as providing an abundant supply of game animals for hunters and trappers. Because fish and game departments put the production of wildlife ahead of the good of wildlife, we don't believe that enough is being done to promote harmonious relationships between the public and wild animals. The consumptive exploitation of wildlife is deeply ingrained in the programs and policies of fish and game departments. I am aware of only one study in the United States and none in Canada.

In 1976, a report by the President's Council on environmental quality revealed that $0.99 of every state government dollar spent on wildlife went to game species. This preoccupation with game species is rooted in the funding structures of fish and game departments. State and provincial wildlife management agencies have vested interests in the exploitation of, say, fur-bearing animals, because their operating revenues are partially derived from user taxes in the form of fees charged for licences and excise taxes. However, it is also significant to point out that a much larger proportion of their budgets is derived from public tax dollars. Again, we've mentioned the public opinion polls in this country supporting, in the main, non-consumptive use.

Trappers and hunters, by helping to pay the salaries of wildlife managers, exert considerable influence on the policies of those departments. The posture of game departments, because they are supported by earmarked taxes, tends to be undemocratic, in our opinion. Game department officials perceive themselves as being answerable only to trappers and hunters, and their decisions are perhaps the most heavily influenced and biased of all government officials. There seems to be a perception, on the part of wildlife managers, that they are free to substitute their own will for that of the public. Most fish and game departments do not even make a pretense of impartiality, openly acquiescing and coming down directly on the side of the commercial industries using wildlife. The problem is further exacerbated by the attitudes of wildlife managers who, through their education, in many instances, regard themselves as technicians to produce more game. These managers see their jobs imperiled by changing attitudes towards the consumptive use of wildlife and also organizations such as our own. It is also important, I think, to realize that when you look at organizations like our own or any animal welfare agency, you would do well to remember that we do not exist in and of ourselves. Instead, we represent the focus for a broad body of public opinion that is trying to focus and explain its concerns over consumptive uses of wildlife. The animal welfare community indeed faces a difficult challenge in trying to convince fish and game officials to integrate the humane treatment of animals into contemporary wildlife management policies. Again, in the United States, a program has been set up for cash donations to non-game programs. The donations should buy the animal welfare community the same type of leverage now enjoyed by trappers and hunters. It's unfortunate that this is necessary, but it appears to be the direction that's going stateside. Thirty-two states currently allow taxpayers to check off a portion of their tax refunds as donations to non-game programs. Taxpayers donated over $9.3 million to non-game programs when filing their 1984 state income tax returns.

Some animals hunt instinctively, but in the 20th century in Canada we believe that recreational hunting is mainly a learned social behaviour. It's also significant, as people who work with animal welfare agencies have long realized, that abuse to animals could also inevitably lead to abuse towards people. We have sponsored studies that showed that early childhood abuse towards animals served as a potential indicator of later violent behaviour towards people. So when people ask us why we should have humane concerns about wildlife or, for that matter, any animal, I think we begin to see that the humans and animals are inextricably bound together by some of those value systems.

Many of you are, in fact, hunters and trappers, and I'm not naive enough to believe that I'm necessarily going to change your opinion here today. It's often been said that you rarely change human nature, but you may change the parameters within which it operates. We believe, as I've said before, that hunting is largely a recreational pastime, and I guess the question is really whether or not society will continue to glorify modern-day hunting as an acceptable form of recreation. Fish and game officials in both the United States and Canada have noticed a decrease in both waterfowl hunting hours as well as hunting licences being taken out between 1983 and 1986. We are not sure whether that's a growing public trend or not, but, taken in conjunction with public opinion polls on non-consumptive use, I think it's a fair assumption to say that it is.

Wildlife management in Canada

Wildlife management is also based on a concept of maximum sustainable yield that originated with forestry management and was later passed on for fish and game populations. Maximum sustainable yield has also become institutionalized in a more absolute and precise role than the wildlife biologists who actually founded the theory had intended it to become. In fact, we believe, it has now become an obstacle to the acceptance of concepts that derive from present-day ecological knowledge.

Sealing

Perhaps we could take some contemporary examples here in Canada. Let's look at the sealing issue. Canada was involved in some instances in killing three primary species of seals for commercial purposes. Let's look at the definition of a humane death as put forward by the Royal Commission on Seals and Sealing or other agencies dealing with wildlife. In the Pribolof seal hunt, subadult males are driven across rocky ground and then killed with six-foot bats. That is a hunt in which Canada does not actively participate, but did receive 15% of the revenues generated from the sale of pelts. On the east coast of Canada, it's legal to shoot a grey seal in the water because it's considered a nuisance, but you can't shoot a harp or a hooded seal in the water because you want to recover its pelt. Currently, as an alternative to trapping, there's research being conducted in Alberta that uses an operating definition of "humane death" that's so broad and all-encompassing that it even includes a leg-hold trap that attendant research has shown to be both cruel and non-selective in its application. So we've learned a hard lesson about definitions and semantics. The lesson we've learned is that humane death has very little to do with what's best for the animal, and instead simply becomes a very elusive term of human convenience.

CITES

Look at CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) enforcement here in Canada. Canada lacks a Federal Endangered Species Act (pressure from the fur trade in this country is directly responsible for declining populations of both the lynx and the wolverine, two species that we know about). The advisory body, COSEWIC (Committee on the Status of Endangered Wildlife in Canada), is composed of many of the provincial, territorial, and federal fish and game officials who are, in fact, responsible for causing some of the problems in the first instance. It's important, when I speak in general terms like that, that I point out that I know individual people, working as officials or conservation officers, who exhibit progressive thinking in terms of non-consumptive use. But I do not believe that reflects the mainstream fish and game official in this country or many other countries around the world.

Recently, there has been a cut in positions. Fifty-five RCMP officers, who are responsible for enforcement, were cut from across the country. I've worked in many developing nations of the world, and I can honestly say that because of the government's lack of commitment, financially and administratively, to CITES enforcement in this country, some developing nations enforce CITES better than we do. I think it's time that Canada lived up to both its national and international obligations.

Predator control programs in Canada

Here in the Province of British Columbia and the Yukon, and planned for Alberta, are programs that are in fact illegal for private citizens to carry out. Shooting at wildlife from moving fixed-wing aircraft or helicopters is in violation of provincial game laws. Flying at low altitudes is in violation of civil aviation regulations. Despite the evidence that is presented by fish and game officials to support those programs, our examination of the evidence shows that in the main the programs exist to try to protect "game animals for people to hunt."

Whaling

Canada has not been a commercial whaling nation since 1972. Many people condemned Japan recently for violating provisions of the International Whaling Commission (IWC) by hunting Minke whales in the Antarctic. But let's take a closer look at Canada's record of voting at the IWC. We withdrew as a full member and became an observer in 1982. There was controversy at the time because Canada had voted against a moratorium on sperm whaling, and, in fact, government officials maintained that they did not leave as a full member of the IWC because of their anger over protective provisions for whales, but because Canada was no longer a commercial whaling nation. That was rebutted soundly in Volume 3 of the Royal Commission on Seals and Sealing, where government officials, at least in evidence before that Commission, admitted that they left for the very reasons they told us they didn't. But yet, in January of this year, when there was a meeting convened in Iceland over the "rational utilization of marine mammals," all of the pro-whaling nations were present at the meeting. Organizations that do not have a pro-whaling stance, such as the United States, were not invited--pointedly left out--but the odd man out at the table was Canada. We approached Fisheries and Oceans and were told that the reason Canada was there was to try to present policies and information on our new sealing policies, the ones announced by the Minister at the end of December of last year. They also said Canada was there to gather information on whaling. Part of the stated purpose of that meeting was to examine setting up an alternative agreement to the IWC, the existing recognized international agreement. It asks a pretty burning question. If Canada tells its public that it left the IWC, the recognized international agreement, because it was no longer a commercial whaling nation, then why is it attending a meeting to look at alternatives to, in fact, bypass the existing international agreement?

Leg-hold trap

I would suggest that the biggest threats facing wildlife in this country and abroad are:

(1) a lack of public awareness and information;

(2) the policies of fish and game agencies directed over the years, and the advice given to politicians;

(3) habitat loss; and

(4) commercial industries using animals.

I read in Monday's Globe and Mail, for example, an article that indicates that federal, provincial, and territorial fish and game managers will be meeting on 25 June in Winnipeg to discuss possible sanctions against the British government for its proposed labelling measure against the wearing of fur garments manufactured from wildlife caught in leg-hold traps.

Let me give you an indication of the information that they've had in the past. First of all, I think it's useful to know that this lack of public information is borne out by the Honourable Member of Parliament, Mr. Baker, who says that perhaps the most disgraceful aspect of this debate is that there's no such thing as a leg-hold trap in use in Canada today. It's illegal in Canada and has not been used here for 10 years. A government document we obtained in 1985 under the Access to Information Act shows that consultants advised the Department of External Affairs exactly what public opinion was on the leg-hold trap:

> It is evident from detailed research that the most serious, immediate, and impenetrable problem facing Canada and its fur trade industry is the use of leg-hold traps. The charges are legion of inhumanity, cruelty, and seemingly needless use of this replaceable device. If Canada is going to deliver an effective message about the economic and social importance of its industry, this must be accompanied by a clear move to stop the use of the leg-hold trap.

We did a statistical analysis of the legislation that does exist in Canada to restrict the use of the leg-hold trap, primarily in the provinces of British Columbia and Ontario. On a national basis, approximately 93% of all wildlife trapped in the wild in Canada can still be legally taken with a leg-hold trap. It's also interesting to point out the inconsistencies that arise as a result of that lack of information or misinformation. In 1978, one of our member societies here in British Columbia provided us with a letter that was written by the Honourable Joe Clark, who was then leader of the Opposition. In it he states:

> My party's concern over the continuing use of cruel trapping methods has been expressed in two private Member's Bills introduced by members of my party, Don Munro and Allan McKinnon, in November 1986 and October 1977 respectively. The objective of both of these bills has been to amend the Criminal Code to prohibit the use of animal steel leg traps.

And yet now, 10 years later, despite all of this information in the public domain, we are condemning the British for passing a domestic consumer awareness measure to warn consumers about a device that has been banned in their country since 1954.

Conclusions

I think that you are going to find the mainstream animal welfare agencies are not naive enough to fail to recognize that pain and suffering are, in fact, cruel facts of life. They are always going to be with us. We can't ever hope to possibly eliminate those either from our own lives or from the lives of animals with whom we share the planet. But the pain and suffering that we inflict on people and on animals, deliberately and knowingly, are different matters entirely, because they are something we can avoid and can prevent from ever taking place.

There was an article in the Globe and Mail several months ago about the patenting of life. This is causing a great deal of furor in Europe and the United States, and it's causing growing concern in this country. It reinforces the notion that humans are not a part of nature, but rather that we consider ourselves above it. Yet around the world we know that we've triggered in many cases a series of cascading losses, environmental losses, that are threatening human welfare and in some countries even human survival. Tropical rain forest deforestation has wiped out about 44% of the earth's tropical rain forests, and that's all occurred since the turn of the century. So we are not really learning any lessons. We are losing species at the rate of one every 24 hours. Do we act to stem that terrible loss, or do we simply fool ourselves into thinking we can recreate that as well?

"HOW DO WE FACTOR IN THE FULL RANGE OF USES OF WILDLIFE?": COMMERCIALIZATION OF WILDLIFE

Robert J. Hudson
Professor
Department of Animal Science
University of Alberta

Franchising the royal venatic perogative

Whether wildlife is a resource to administer, a phenomenon to study, a fascinating story to tell, or a profound concept to sell, wildlife professionals are notable among those that profit directly from wildlife. We are hardly in a position to be against commercialization in the broadest sense. As a matter of fact, we go to great lengths to document the revenue wildlife generates (Prescott-Allen and Prescott-Allen 1986). Our fears centre on privatization of wildlife and commercialization of products as opposed to services.

We have ample reason for concern. Stirring stories are told about illegal traffic in wildlife and its disquieting similarity to the drug trade. However, the solution is not as simple as slamming the door shut with tough legislation and more determined enforcement. Just as we distinguish aspirin, alcohol, and cocaine, each form of commercialization calls for different action. Some forms encourage good management on private or communal land. Others control black market prices by providing alternative legal supplies. Still others are as deadly as crack. To distinguish positive from depletive forms, I use the term "franchising" because it is less perjorative, establishes historical context, and appropriately implies subcontracting the Crown's responsibility to sustain the flow of recreational and material benefits from wildlife.

Despite this optimistic definition, the pros and cons remain hotly debated. As the right-wing proponent, I am expected to counter charges that franchising is morally wrong and a risk to the security of wild populations with claims that it is both a right in certain contexts and an important incentive for conservation in others. I take a more oblique approach and ask what this debate says about Canadian game administration and those of us directly or indirectly involved. As an opening position, I suggest that conservation has been transformed into the self-indulgent preoccupation of hopeless romantics who have now become the main obstacles to further progress. The purpose of conservation has been subverted by the process. Above all, it has lost the ability to adapt.

If you are through changing, you are through

As students, we learned that wildlife management was as much an art as a science. It is probably more of a religion than either. Not that this is necessarily bad. It is simply descriptive of the course that we have taken. Conservation is becoming increasingly moralistic, evangelical, and, frankly, bigoted. If there is an up, there is a down; if there is a right, there is a wrong; if there is good, there is evil; if there are good people, there are bad people. Consequently, we divide the world along ethnic, occupational, and socio-economic lines. We see native people as being different from European people, and landowners as different from city people. Most recently, Orientals have become the scapegoats of a rising poaching problem.

The canons of our faith in conservation are public ownership and a predominantly recreational relationship between wildlife and man. Commercialization seems to fly in the face of everything we stand for and to untie some important security measures. Besides, most professionals don't think anything needs fixing. Since its birth some 80 years ago, the North American system seemingly has proven singularly successful and refreshingly different from antecedent policies of Europe--a sort of enlightened step in the evolving relationship between man and nature.

Whereas some pride may be both warranted and constructive, vanity has become delusion. We have been blinded to the possibility that our wildlife policy is neither very responsive to changing needs nor particularly innovative, points scored by several European conservationists who have reviewed the North American situation (de Nahlik 1987; Nicholson 1987).

We've had our successes. Public ownership provides equal and free access to wildlife. This is probably one of the most important achievements. Of course, whether this can be considered fair depends on whether the contributions of individual citizens are equal. This turns out to be a self-fulfilling prophesy: not only are equal contributions assumed, they are guaranteed to be equal and (unfortunately) just a guilt's width from zero. We have heard that people will contribute to the financial needs of conservation, but our mistake is believing that several hundred million dollars is a lot of money. For a sobering perspective, remember that McDonald's, worldwide, sells 60 billion dollars' worth of hamburgers annually.

Efficiency has a poorer record than equity. We still can offer respectable opportunities for wildlife-based recreation. But to what extent is this simply due to Canada's sparse population and settlement pattern? We also must explain some rather dismal failures on lands that have significant value for anything else. Not surprisingly, a disproportion of endangered species is from the prairie/parkland communities where it is possible to cultivate from horizon to horizon (Holroyd *et al*. 1987). At least on agricultural lands, the achievements of wildlife management seem almost inadvertent. Grain prices have more to do with wildlife management on agricultural lands than does wildlife policy.

Neither can we take refuge in originality, although North American wildlife policy did seem reactive enough at the time its foundations were laid (Tober 1981). Decision making (who decides and who abides) has changed greatly. Monarchies have been replaced by participatory democracies. However, this is part of general political reform and can hardly be credited as our distinctive achievement. The relevant matter is how policies and programs are designed and administered.

Although there was ample opportunity for innovation, North Americans implemented a system that is remarkably similar to the Forest Laws introduced by Charlemagne in the 9th century, i.e., before they were reinforced by rather harsh measures that led to their infamy (Wolfe 1970). Far from inventing something new, we adopted the ancient model from which modern European systems evolved. I don't doubt its appropriateness given circumstances at the turn of the century, which were similar to the problems faced by the Frankish kings. Centralized management was an effective model for frontier administration and remains so for 75% of Canada's land base that is in public ownership. I'm more concerned about how it adapts to changing circumstances on private lands. Most of what I say relates to that particular problem.

Conservation tool kit

Since ancient times, nature conservation has been based on four main administrative devices: sanctuaries, sanctions, education, and incentives. They have been invoked sequentially and predictably as conditions evolved (Glacken 1967). Game administration in North America has recapitulated the first three and is taking its first uneasy look at the fourth. I see conservation in Canada as being simply immature rather than a striking new invention.

Sanctuaries

In the ancient world, wildlife was defined as belonging to no one by the "natural" law of *res nullis* (Whittuck 1904). However, wildlife could be possessed, and hunting opportunities (and indirectly game populations) were protected by royal, military, and private hunting reserves variously called *paradises* (Asia minor), *theriotrophia* (Greece), *vivaria*, and *leporia* (Rome) (Anderson 1985). Their popularity rose in response to local declines of game, particularly between 100 BC and the retraction of the Roman empire some 500 years later (Hooper 1934; Forster and Heffner 1968).

The first serious efforts of centralized administrations to use sanctuaries as instruments of resource management came with the establishment of medieval royal forests ("forest" comes from the Latin *fera statio* or home of wild things, and only indirectly had anything to do with trees). These were established to suspend rights of free utilization of resources guaranteed by the aboriginal laws, *leges barbaratum*, in effect since Roman times. The monarchs issued warrants (licences) for wood, pasturage, thatch, etc., to ensure sustained yield management and, of course, to earn revenue for the state.

We like to think of these forests simply as hunting reserves and as symbols of royal privilege, yet at least some monarchs and statesmen feared the imminent collapse of their kingdoms from the depletion of forests for iron smelting, glassworks, construction, and home fuel. They saw these measures as necessary and justified them in a familiar paternalistic spirit (Glacken 1967).

Sanctions

The state extended game protection through an increasingly comprehensive system of game laws (Kirby and Kirby 1931; Kirby 1933). In feudal Europe, social class was a practical criterion for apportioning harvests by "unlimited privileged access." In time, criteria of social class and property were replaced by limited universal access regulated by licensing. Bag limits were seldom used, perhaps because no one believed they were enforceable. Restrictions on possession of hunting weapons and certain breeds of dogs were among the earliest controls. Sale of game was a common prohibition, because noblefolk had no need to earn money from game, and it reduced the temptation for those of lesser rank.

Making game laws is one thing; enforcing them always has been quite another. The state has always walked a thin line between imposing effective deterrents and inciting revolt. At first, penalties were light. But the frustrations of maintaining control led to increasingly harsh measures defied by a growing host of hero-poachers. Repeated escalations and retractions have continued into modern times. In several African states, poaching rhinos is a capital crime, and poachers sometimes are killed during encounters rather than arrested to stand trial. The whole thing seems generally endorsed by otherwise civilized people.

Education

Sanctions have always been backed by propaganda. At first, public education was aimed at informing subjects of game laws and the consequences of infractions. As these became more harsh, the state tried to justify occasional abuse of power and to win local support. In modern times, propaganda has become increasingly sophisticated. Threats and coercion were replaced by appeals to sensibility, conscience, reason, or self-interest. These appeals divide the world's people into those who are sensitive/mean, good/bad, wise/foolish, and generous/greedy. Whatever happened to education as enlightenment? Perhaps the end justifies the means.

Incentives

The greatest achievement of Old World systems, and the greatest failing of ours, has been in providing incentives through various warrants and franchises. Initially, these were offered as a reward for services (or political support), but increasingly became considered the right of a broadening range of social classes. The private counterparts of the royal forest--namely, the chase, park, and warren--increased in popularity. In continental Europe, this evolved into an interesting triangular partnership (the revier system) of state, landowner, and public, which provides incentives for wildlife conservation in the face of formidable pressures on resources (Bubenik, in press).

Administrative models

The challenge is to orchestrate these implements into a coherent and effective force. Administrative models worldwide differ mainly along one gradient in the degree of centralization: namely, the degree to which responsibilities for wildlife management are franchised. In Europe, which is probably the most polar, there is very free franchising of the right to lease hunting privileges. This is, of course, very jealously guarded by the state in most North American jurisdictions.

We might expect this difference to be based on political theories (especially relating to human motivation), notions of individual rights and freedoms, or views of the proper relationship between man and nature. Or we might interpret it as a strategic response to local circumstances--the higher human density and human proportion of land in private hands may have forced concessions in Europe that simply haven't been necessary in America. However, I'm struck by the historical thread that wildlife policy has always reflected a struggle of competing interests, whether nobleman/commoner, market hunter/sport hunter, or townfolk/countryfolk. The administrative style probably says a lot about when the wildlife constitution was written. In Europe, it was written early enough that the power base was still on the land. It was once true to speak of the powerful landowner! In America, it followed industrialization, so essentially power shifted to the Ivy League with a whole different set of values and interests. Whatever the reasons for this polarization, centralization of wildlife administration in North America has had a number of inevitable consequences, some good, some bad. I am going to exaggerate these to make them perfectly clear.

Politicized

The first consequence is that wildlife management has become politicized. As public servants, wildlife administrators must encourage public participation. It sounds quite democratic. The inevitable end point is management by referendum or, where competing interests are involved, by mob justice. Winning arguments has become more important than managing wildlife. Indeed, much of the research we do is designed to justify what we did rather than to learn something new. Too much human effort and too many financial resources are diverted to political obfuscation. In the exhilaration of combat, we forgot that many problems facing wildlife will not be resolved by votes or outpourings of public concern, and maybe not even by generating more money. Many things are based on how an individual behaves, not what position he professes.

Urbanized

With politicization comes a shift to the urban power base. In the legitimate pursuit of self-interest, urban people attempt to extend their backyards to the countryside and to keep costs of wildlife-based recreation as low as possible. That is fair enough. But one group's eagerness to save limits another's to earn. It is not a question of whose interests are most legitimate. It is just that I see the aims of conservation better served by catering to rural interests. This may be an unpopular notion; however, if we are perfectly honest, not everyone's attitudes are equally important, in the sense that some people are in a position to behave differently and make a lot of difference and other people aren't. Sometimes by capturing the interests of the many we lose the support of an important few. Those we reach may be less important than those we alienate.

Propagandized

With few material grounds on which to defend wildlife, arguments have to be intellectualized, and influence has shifted from the powerful landowner of the past to the merely eloquent. This attracts a larger audience but builds a naive and hypocritical basis of popular support that may frustrate as much as aid management. The hypocrisy is evident in our popular environmental slogans. We claim the essence of wildlife is its wildness, when we are simply concerned about the loss of recreational opportunity, the loss of a good hunting experience, or the loss of appreciating wildlife for its contemplative value. Similarly, we profess that "wildlife should be conserved because we care, not because it pays," when we really don't want to pay for it.

Propaganda also paints us into some corners. We use it to justify doing nothing. For example, wildlife management is a contradiction of terms--if it is wild, it isn't managed. More specifically, we excuse ourselves from serious efforts to develop incentives. For example, because wildlife belongs to the public and because conservation is a moral duty, we ask why certain individuals (farmers) should profit from fulfilling an obligation or, for that matter, even be fully compensated for crop or livestock depredation.

Standardized

With all of this comes standardization. Perhaps because issues are politicized and polarized, centralized systems see activities as competitive and mutually exclusive. We can't see multi-tiered management systems. We want the people in Old Crow to manage wildlife the way we do in Guelph. We want everyone to appreciate wildlife the way we do--to use it the same way, and to be subject to the laws. It is only fair! Consequently, centralized management tends to be conservatively designed to minimize opposition rather than maximize benefits. There is a limited sense of what is possible and little diversity of approach to serve as a source of motivation and renewal.

Compromised

Centralized systems have always been compromised by the ability of government to devote resources to wildlife. There is a definite upper limit with other competing demands to put much more into it than we have at present. What you see is what you get! There is also the relative inability to influence the activities of landowners.

Many people dream of a swell of public support that will ensure continual growth of wildlife agencies and their programs. Yet, efforts to win public sympathies are not new and certainly not cumulative (Barker 1980). People will vote "yes" and fill out questionnaires in an appropriate way. They will put their hands into their pockets and bring out small change. But conservation appeals must contend with a growing number of philanthropic causes that, in Canada, currently compete for six billion dollars annually.

Another problem is that funds raised through appeals or political pressure don't go far to resolve the problem of wildlife conservation on farmlands. The two most common arrangements have been to repatriate land by lease or purchase and even reluctantly by compensating landowners directly or indirectly for depredation or lost opportunity. Neither is particularly satisfactory. First of all, it is very expensive, and this limits the number of acres secured. Second, this approach pays people to do nothing! Rather than offering farmers hush money, we should change the rules and allow them to work in their own best interests.

Moral persuasion--or incentives?

Can we rely on moral persuasion? By endorsing limited commercial incentives for management of wildlife in specific contexts, I don't deny that wildlife has intrinsic value. Beyond prudence, mankind may owe nature "moral consideration" (I prefer the ethical implications of E.O. Wilson's [1984] concept of biophilia). But it is a mistake to confuse this with how nature conservation is to be achieved. The highest morality is to devise something that works, and our system doesn't. In my view, environmental fundamentalism is as likely to solve environmental crises as organized religions are to establish world peace. Ideological movements establish an important climate for change, but they don't replace serious negotiation, based on Garrett Hardin's (1977) first law of human altruism: "never ask people to do anything they consider contrary to their own best interests."

For almost a century, we have tilted at windmills. We need a more honest, realistic, and anthrocentric orientation. People are a resource to be tapped rather than an audience to be pleased. They are certainly not just a problem to be controlled. We must respect their right to value wildlife differently and recognize not only the validity of their self-interest but also its power as a force in conservation.

Opposition to commercial utilization is presented as an important lesson of history without distinguishing various forms of commercial utilization. If it pays to destroy game, we can count on its rapid demise. But if it pays to conserve wildlife, we can regain wildlife abundance. Although it has clouded over time, this distinction was crystal clear to the fathers of North American wildlife policy (Hewitt 1921; Hornaday 1931). The difference between greed and initiative is whether it works for or against collective interests.

I would like to end with one parting shot. If we assume humans are motivated by self-interest, we really have to ask how that applies to the wildlife profession. Considering the services we market, our interests would be best served by keeping wildlife conservation in a state of protracted anaphylaxis--in utter chaos. I wonder if that isn't a fair assessment of the current situation.

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Session 2: "Is current wildlife management relevant?" (4)

"HOW DO WE FACTOR IN THE FULL RANGE OF USES OF WILDLIFE?": DISCUSSION

Frank Beebe (Falconers Organizations): I have with me two court decisions that should bring everyone back down to earth. They are Ontario Supreme Court decisions that are directly involved with wildlife. One of them refers to Operation Falcon, which was that big falcon bust in the Yukon about two years ago. The court decision was that birds of prey coming in from outside and raised in captivity in Ontario are not wildlife, even though the species may be native to Ontario. The other court decision was, in brief, that in Ontario a bison and an elk are not wildlife.

Monte Hummel (World Wildlife Fund Canada): I'm concerned about the implications of the policies and positions the World Society for the Protection of Animals has taken on the people who live in northern Canada, in particular. You have argued publicly before that the fur trade, in particular, is not in the best interests of native people, and you have alluded to unnamed leaders in the native movement itself who are beginning to acknowledge this fact. Why then do the leaders of the native movement in Canada consider themselves to be your greatest opponents? You appear to be saying that you know what's in the best interests of other people and that if they don't understand they are being exploited by an industry then they haven't come up to the high level of understanding that you have of their history. Could you clarify your position on this?

Michael O'Sullivan (World Society for the Protection of Animals): First, I'd like to ask you not to attribute a paternalistic attitude to me that I don't possess. Second, some native leaders have approached us but have asked us not to repeat their names because of a backlash they fear from other elements of the native community. Third, documents produced at the exhibit at the British Museum of Mankind show that the natives condemn the fur trade themselves. In a debate on 19 December 1987 in Ottawa, David Montour of Indigenous Survival International admitted that, in fact, there was no love lost between his organization, or the native community, and the fur trade. At a two-day symposium entitled "The Native Use of Wildlife" on 29-30 January 1987 in Montreal, we again discussed this issue. I think that any people that feel their interests are affected have an obligation and the perfect right to defend their attitude in public. Native groups in Canada are doing that, as are other elements of the fur trade.

What we object to is the misleading information put out mainly by the fur trade itself that suggests that native people are a larger component of Canada's overall fur trade than they really are, either as it exists today or as it existed in the past. Historically, native people have admitted that they've been kept at the trapping end of the spectrum. At the Montreal symposium, Del Haylock, who is with the Fur Council of Canada, admitted that there were only two out of about 400 manufacturing and retail operations in this country that were owned in whole, or in part, by natives. Half of the revenue derived from Canada's fur trade is derived from cage-reared wildlife, which, again, native people have admitted they have little or no involvement with.

Herman Schwenk (Unifarm--Alberta): With regard to a statement you made about the suffering that's inflicted on wildlife by people, I think that people assume that if you stop the consumptive use of wildlife then you eliminate all suffering in wild animals. Of course, that's not so. Animals inflict terrible suffering upon themselves, as well as do people. I don't think anyone feels that we should deliberately cause suffering to another animal or to another human being.

My second point concerns the public opinion poll statistic that about 82% of the people support non-consumptive use of wildlife. I think we all support non-consumptive use of wildlife, but many of us also support the consumptive use of wildlife. I believe that if we were to eliminate the consumptive use of wildlife, society would become apathetic towards wildlife, and wildlife would just gradually disappear. You have to have the vested interest of someone involved or an incentive of some kind in order to promote the wildlife.

Michael O'Sullivan (World Society for the Protection of Animals): First, I've never tried to suggest that pain and suffering aren't facts of life. I was responding to the argument by trapping and hunting concerns that they are providing a less cruel death than Mother Nature would provide. Second, I disagree with your suggestion that if there wasn't consumptive use, there wouldn't be enough people caring about wildlife. In fact, if you were to try to run fish and game budgets based on simply the revenues generated from consumptive use of wildlife instead of using some of the money that the Canadian taxpayer pays every year, you'd find that those industries would not be able to survive.

Herman Schwenk (Unifarm--Alberta): You are talking about economics, and I'm talking about the philosophy of the situation. It has nothing to do with the money coming into the departments. It has to do with the feelings that are involved--if you don't have a vested interest in some of that wildlife, you are going to get to the point where you really don't care about it.

Tom Wood (BC Wildlife Branch): One misconception keeps creeping into a number of the discussions here, which involves using American examples and American models to portray the Canadian situation. You used two examples from American studies, from American administrative structures, that don't fit the situation in Canada. In Canada we have virtually no dedicated revenue derived from the sale of licences or other means. Virtually everything comes from general revenue. That's not the case in the United States, so the examples you cited for the United States do not fit directly here.

Michael O'Sullivan (World Society for the Protection of Animals): Part of the concept of our organization, working in so many countries, is to try to present models or ideas that have worked in other countries for consideration in nations that are looking at different issues. The purpose in citing those examples was to suggest a model that might be looked at for consideration in this country.

Jack Berryman (International Association of Fish and Wildlife Agencies, USA): I think the suggestion that there is not an interest in, or a responsibility for, non-game or non-consumptive uses in the United States is erroneous. It's true that most of their funds are derived from fishing and hunting licences. However, as a consequence of that, hunters actually pioneered the conservation movement--the pesticide issue, the wetlands drainage issue, and clean water. I think the same is true in Canada. The past and present roles and responsibility of the state agencies are for the well-being of all wildlife and to represent all of the people, not just the fishermen and hunters. They've supported the non-game bill in the Congress to give federal recognition to non-game, the Endangered Species Act, the Marine Mammal Act, and so on.

Michael O'Sullivan (World Society for the Protection of Animals): The purpose of this Conference is to examine whether or not current management practices are outdated in Canada, and so I feel that it was fair to raise those points.

Ray Demarchi (BC Wildlife Branch): We use the Whooping Crane as a positive story in conservation--restoring a species. But one of the least-known stories and one of the most successful in terms of true restoration of habitat and species has been the California big horn sheep recovery program. Since 1848, California big horn sheep populations have been protected from hunting in California. Between 1948 and 1974, however, the California big horn sheep populations declined to about half of what they were in 1948. This doesn't mean that you have to hunt a species in order to conserve it or to restore it, but it certainly does support the hunting hypothesis that those states that had hunting had a very strong interest in restoring the California big horn sheep.

Rosemary Fox (Canadian Nature Federation, Sierra Club of Western Canada): My question is directed to Professor Hudson. You made a couple of statements, that not everybody's attitude is equally important, and that people's concern over the loss of wilderness was, in fact, a concern about loss of recreational values. Wildlife managers are technical experts trained to deal with technical matters and answer technical questions, but I do not believe that they have received the training to judge whose values are superior in society. On what basis do you feel qualified to make those kinds of judgements on other groups' values?

Robert Hudson (University of Alberta): By saying not equally important, I mean equally influential towards the aims of conservation. For example, gaining support of a landowner with a 256-hectare farm may make more of a difference than the change of one member who isn't in a position to influence the land base to that degree.

"IS THERE TOO MUCH EMPHASIS ON CONSUMPTIVE USE OF WILDLIFE?": SUPPORT FOR NON-CONSUMPTIVE USE

Martin H. Edwards
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It is my contention that the current direction of wildlife management in Canada is out of date, because so much of it is aimed at single-species management; out of balance, because most of the research and management spending is for consumptive users, who are a decreasing minority; and sexist, because women comprise a tiny fraction of the consumptive users, but are equal participants in non-consumptive uses of wildlife.

Objectives for wildlife management

What should wildlife managers try to do? The World Conservation Strategy proposed three specific objectives for living resource conservation for sustainable development:

(1) to maintain essential ecological processes and life support systems;

(2) to preserve genetic diversity; and

(3) to ensure the sustainable utilization of species and ecosystems.

These objectives have been strongly supported by the World Commission on Environment and Development in the Brundtland Report, "Our Common Future"; by the United Nations Environment Program's (UNEP) Governing Council and General Assembly in their report "Environmental Perspective to the Year 2000 and Beyond"; and by the Canadian Council of Resource and Environment Ministers in its "Report of the National Task Force on Environment and Economy."

Policies of non-consumptive use enable all three objectives to be realized. Out-of-date management for single-species consumptive use can work against all three. As you all no doubt know, when there is an ecosystem with a harvestable component, it is theoretically possible to remove a certain fraction repeatedly. The maximum that can be harvested repeatedly is called the "maximum sustainable yield." Resource managers often urge this as the ideal harvesting rate. If you harvest more than that amount, the productivity declines and may stay lower for a long time.

As you also may know, the maximum sustainable yield notion for exploiting living resources is now being questioned. Much of current practice in fisheries, forests, and wildlife management is still based on this concept. But each species population is considered as a single resource stock capable of human exploitation. This approach leaves out the fact that species exist as components of ecosystems, and such components interact. Cropping and removing a high percentage of any species population can have immediate effects on the population of predators dependent upon that species--along with scavengers, parasites, and organisms of decay and recirculation, which also make use of the so-called "harvestable surplus." Populations of existing or potential competing species may be favoured, along with populations of species upon which the species being cropped normally feeds. Other more subtle effects can also be anticipated.

A more conservative approach to the management and utilization of wild species is now being advocated by the International Union for Conservation of Nature and Natural Resources (IUCN), based on broader ecosystem considerations and on continuing surveys, monitoring, analyses, and assessments of the consequences of any plan or ongoing utilization scheme. The risk of any irreversible change or long-term adverse effect brought about through utilization is to be minimized. The sum total of consumptive and non-consumptive values available from any ecosystem is to be optimized.

Of course, the World Conservation Strategy objective "to ensure the sustainable utilization of species and ecosystems" does not automatically imply that any utilization that is possible must of necessity be carried out. It is a management restriction, not an authorization.

Non-consumptive users are especially interested in maintaining biological diversity, which may be defined as "the variety and variability among living organisms and the ecological complexes in which they occur." This includes the genetic variability within species and their populations, the variety of species and their life forms, and the diversity of the complexes of associated species and of their interactions and the ecological processes that they influence or perform.

If you manage habitat for moose or deer "production," you will of course incidentally be encouraging other species. But the "trickle down" theory of economic development--if you take care of the rich, the poor will be alright--has long been discredited. And so it is with the single-species management approach. Non-game species and their ecosystems should be given higher priority. There is a clear need to shift the emphasis in research and training towards such areas as ecosystems and non-game species so that our academic and other institutions keep pace with the broadening appreciation of wildlife values by the public.

Management for the users

Wildlife management has been called the science and art of studying and influencing the nature and interactions of habitats, wildlife populations, and human populations in order to achieve specific goals or benefits by means of the wildlife resource. How should wildlife be managed for the users? What are the current demands for consumptive and non-consumptive uses of wildlife, and what are the resources allocated by wildlife agencies to consumptive and non-consumptive uses? We have heard reports of the declining demand for consumptive use of wildlife and the increasing demand for non-consumptive use of wildlife, so the trends are clear. We have also heard what the wildlife agencies are spending.

Here is a quotation from Fern Filion's report, "Demand for Wildlife to 2001": "four out of five hunters would probably welcome an expansion of wildlife management programs to meet their broader non-consumptive interests . . . wildlife management agencies thus have a strong incentive to expand their programs beyond traditional concerns with hunting."

User demands

I'd like to remind you of some numbers from the famous 1981 Statistics Canada National Survey of 100 000 adult Canadians as reported in the 1985 paper "The Importance of Wildlife to Canadians" by Fern Filion and others. With respect to attitudes, 82.8% of adult Canadians expressed some or great interest in participating in non-consumptive wildlife-related activities, whereas only 26.9% indicated some or great interest in participating in consumptive wildlife-related activities. So three times as many were interested in non-consumptive as in consumptive activities. Would this not lead you to expect that roughly three-quarters of the wildlife agencies' budgets should go to non-consumptive uses and one-quarter to consumptive uses?

With respect to actual participation in non-consumptive activities, 83.8% participated in indirect activities, 66.5% participated in residential wildlife-related activities (such as feeding, watching, and photographing wildlife), and 19.5% took special trips to encounter, watch, and photograph wildlife. Both men and women participated equally in these activities.

The 1981 survey found that 9.8% of the Canadian adult population hunted, but only 10% of these hunters were women. Thus, only 1.9% of Canadian women hunted in 1981, whereas 18% of Canadian men hunted.

Note that overall twice as many people (19.5%/9.8%) took special non-consumptive trips as participated in hunting. The sex ratio is truly remarkable: over 10 times as many women took special non-consumptive trips as hunted! Incidentally, a more recent survey of Alberta's hunters (by Boxall and Smith) showed that female hunters have never numbered more than 5.8% of Alberta's resident hunter population (which by 1984 had itself fallen to 8.0% of the eligible Alberta residents). So only 0.46% of Alberta's women hunted in 1984.

Resource allocation

I said at the outset that the spending is out of balance. Based on the 1981 survey figures, you might expect roughly three times as much spending on non-consumptive as opposed to consumptive uses. Furthermore, current policy is very sexist, as women are being short-changed. Women might expect 10 times as much money to be allocated to non-consumptive as to consumptive programs. Even men might expect at least equal emphasis on non-consumptive programs. But what really happens?

If you look at the Wildlife Branch of the Ontario Ministry of Natural Resources, for example, you can find about five policy programs for game species, including:

- a trapping program, with a senior biologist and three support staff;

- a moose program, with a biologist and three support staff;

- a deer program, with a biologist and one support staff; and

- a small game program, with a biologist and one support staff.

There is, however, only one non-game biologist, but no policy program!

I don't have a budget comparison available, and they won't provide one, but I think that probably more than 85% of the budget is allocated primarily to game species. This leaves less than 15% for non-game species. It is clear that the Wildlife Branch of the Ontario Ministry of Natural Resources concentrates heavily on managing a very small portion of the fauna of Ontario, namely the game species. Only one permanent employee, their non-game biologist, has the responsibility for all the vertebrate non-fish species in Ontario, except for the less than 100 species of wildlife that can be legally hunted or trapped in Ontario. Besides the 300 vertebrate non-game species, she is also responsible for all of the endangered species, the plant species that are not merchantable timber species, and the Peregrine Reintroduction Program.

I think you will have to agree that in this one agency, which may or may not be typical, there is a serious imbalance. I prefer not to call it a management problem so much as a fantastic management opportunity!

Conclusions

Clearly, the dramatic growth of interest in non-consumptive uses of wildlife has occurred without the full support or leadership of most wildlife managers. It is time to allocate a larger fraction of current resources to non-consumptive uses of wildlife. Of course, more money and people are needed, but wildlife managers should not wait for new money to act--they should start redistributing staff and resources now!

It is important to recognize that non-consumptive users are low-impact users, and it will be easy to manage such uses sustainably. The potential for growth in public support and participation is there. When wildlife managers respond to the demand with clear initiatives, the additional public support will be a welcome change. Once again, these wildlife managers can lead the public and be given credit for serving the broad interests of all Canadians.

"IS THERE TOO MUCH EMPHASIS ON CONSUMPTIVE USE OF WILDLIFE?": SUPPORT FOR CONSUMPTIVE USE

Corky Peterson
Education Co-ordinator
Manitoba Registered Trappers' Association

I want to thank those people who made it possible for me to be here to share my concerns and opinions with all of you. I'm going to deal straight from the heart on how I feel as a person, as a long-time trapper, as a long-time professional guide, as a former commercial fisherman, as a prospector, and as a consumptive resource user.

I was raised on a trap line. My earliest recollections were not of the enjoyment my father got on a hunt, but of the work that it involved, because his hunting placed meat on our table. My family still eats moose meat every year. That's the major component of our diet.

My father emigrated from Sweden in 1907 and lived and trapped in the area that I currently trap and have been trapping now for the past 35 years. From the time he came here until his death by drowning while trapping in 1954, he fed us and clothed us through the efforts of consumptive resource use. The one thing that he taught me all the way through life--as a child, as an assistant trapper, and finally when I took the trap line over when he was physically incapable of carrying on--was to be sure to leave enough for tomorrow, to provide sufficient and adequate stocks for future generations. The bottom line, insofar as the use of wildlife is concerned, is that wildlife is something that cannot be stockpiled. If you don't use it, you lose it. It's as simple as that.

Need for harvesting

The lesson my father taught me about always leaving something for tomorrow has a new name today--concept resource management. The trapper and the hunter and the fisherman, or the consumptive resource user, recognizes and accepts this age-old responsibility of careful management. He has learned, sometimes through bitter experience, that wildlife must be controlled to conform with the care and capacity of its present range or habitat. Clearly, the most effective method for achieving this is through legal, orderly harvest--when the stocks warrant it. The socio-economic benefits are obvious because of the present user pay system. The licence and royalty fees collected from trappers, hunters, and fishermen provide the financial base for federal and provincial wildlife management agencies, which are charged with the responsibility of protecting and ensuring the continuation of the various species that we're concerned with.

Harp seal harvest

The time has come for all of us to recognize the devastating effect of decisions regarding the use of various wildlife species being made on a purely emotional basis. The outstanding case in point is the loss of the market for seal furs. The only beneficiaries were the individuals, groups, and organizations that orchestrated this travesty. These people capitalized on, and are still capitalizing on, one of the most effective fundraising scams in the world. Animal activists, regardless of their chosen apellation, all fit into the same box. Their fundraising efforts based on half-truths and misinformation are exceeded only by TV evangelism.

Losers

Who are the losers? The losers, for starters, are Inuit people in the high Arctic--their small communities lost their only source of income. The Newfoundland sealers, their wives and children, and all the Maritimers who depended on the seal harvest for all or part of their income are the losers.

Overpopulation

Now another problem has been added to this. As of 1986, a census was taken of the harp seal population. During the controlled harvest that was carried on for many years, we maintained an average harp seal population somewhere in the vicinity of 200 000 to 250 000 harp seals. That figure has now jumped to the astronomical sum of more than 2.5 million harp seals. Each adult harp seal consumes 1.5 tons of fish per year. Most of that is codfish.

Cod parasites

That brought in another interesting little factor that makes life that much more difficult for the former sealer who's now a cod fisherman. The seal is known to be the carrier of the cod worm--it passes the cod worm on through its feces. Number one codfish used to have somewhere between one and five parasites per pound of flesh. That was considered to be an acceptable marketable product. Today that count has risen to more than 50 parasites per pound of cod flesh as a direct result of the overpopulation of the seals. The cod fisherman now pays more for his fuel and his equipment and gets less for his product. We, as consumers of that fish product, get a subquality product.

Seal disease

Another problem with the seals is disease. Many people suggest that this disease is caused by pollution, but I think it's nature's way of controlling the overpopulation of the seals. What we've done is let this reach the point where we've lost a very valuable market that provided income for many people, and now we have a problem on our hands simply because we have too many seals.

Lynx

It was mentioned earlier that we have trapped two species in Canada virtually to the point of extinction. The particular species mentioned were lynx and wolverine. The lynx is a cyclical animal, and its cycle is tied directly to the rabbit cycle, which we all know is a seven-year cycle. The lynx cycle is an 11-year cycle, and it has a tendency to meet up with the bottom end of the rabbit cycle every 35-45 years. When this happens, it takes a long time for them to respond. This has happened for centuries, but we still have lots of lynx. We're managing them very carefully. Manitoba was one of the few provinces that insisted on a complete closure. This again was instituted by trappers. We now have a quota system, but only in various portions of the province where the population will sustain the harvest.

Wolverine

The wolverine was the other species mentioned. For the past 100 years, there has been virtually no fluctuation in the number of wolverines harvested on a Canada-wide basis. That indicates to me that we're not doing very much damage to the population. As a matter of fact, we're probably maintaining it, because there have been no great rises or great drops in the numbers taken.

Fur trade as income source

Another problem concerns native peoples. Those of us who have had the opportunity, or the experience, to live in some of the northern communities on the reserves have seen first-hand how vitally important--contrary to what an earlier speaker said--the fur trade is to those people on the reserves. In many cases, it's the principal or only supply of cash. They have a welfare system, but I don't think any of us are any more interested in becoming part of a welfare system than the majority of the recipients, particularly the native people of the northern communities. If they lose the right to harvest this resource, those people will be affected far more than the average urban dweller will.

Conclusion

I live in a very remote area. I've never seen a pollster. But I know where the polls are conducted. They are usually conducted in large urban centres like Vancouver, largely with people who really don't know very much about what they are being asked. No pollster has ever asked me my opinion on how I feel about resources, so I guess this is my chance to explain it. I feed that in order for men and animals to survive, we have to live together. Every time a new stretch of highway is built, every time a new condominium is established or a new subdivision is introduced, we are encroaching on the habitat of the animals. We've reached a point that in order to make certain they survive, we have to control population levels to some extent. One of the ways to do this is through harvesting.

"IS THERE TOO MUCH EMPHASIS ON CONSUMPTIVE USE OF WILDLIFE?": DISCUSSION

April Maurer (Federation of BC Naturalists): What I see happening in this debate is that consumptive users are concerned that we as naturalists, or as non-consumptive users, are going to tell them not to hunt! What we as non-consumptive users are saying to you is, why don't we get more in terms of management? Would this not be a way of including the general public? Are there not benefits from seeing people more involved, more interested, more concerned about preserving habitat that preserves animals, not just for non-consumptive use but maybe for consumptive use too? I ask consumptive users, what are you afraid of? Why not share the resource a little?

Corky Peterson (Manitoba Registered Trappers' Association): I neglected to say, in my address to this group, that I believe there is lots of room for both the consumptive and the non-consumptive user. I concur with your statement on improving habitat, which further enhances my approach to the situation, and there is absolutely no reason why we can't get together and work out a reasonable, equitable solution for all people involved.

Rick Searle (Freelance writer): Corky, I have some difficulties with one argument that you used twice in your presentation, and that is the use of hunting, or consumptive use, as a way to somehow compensate for habitat loss, pollution, etc. Your argument strikes me as a bit illogical.

Corky Peterson (Manitoba Registered Trappers' Association): As a user of the resource, it's incumbent on me to maintain and protect the resource. As a trapper, for example, if I were to take all the fur-bearing stocks off my trap line today, I would be out of business tomorrow. I can't let that happen. I am trapping the same area that my father started to trap in 1907. I take more fur off it today than has ever been taken before. That's because we're good managers. We're looking after the stocks we have. I believe that's the answer to your concern.

Michael O'Sullivan (World Society for the Protection of Animals): I would like to deal with two points you raised. First of all, the poll that I referred to and you said you've never seen was conducted by the Government of Canada--if you've got objections to it, you should probably take it up with them.

Corky Peterson (Manitoba Registered Trappers' Association): I have no objections to the poll. I just stated that polls, generally speaking, are conducted in large urban centres, not in rural areas.

Michael O'Sullivan (World Society for the Protection of Animals): This was a cross-section of 100 000 Canadians from all walks of life from across the country.

Corky Peterson (Manitoba Registered Trappers' Association): I won't argue that point with you.

Michael O'Sullivan (World Society for the Protection of Animals): Secondly, I would like to read, for your information, a report released in 1984 by the Priorities and Planning Secretariat of the Government of the Northwest Territories, indicating that:

> Returns from trapping are generally much lower than other income sources, with less than 5% listing their occupation as trappers. The majority are part-time trappers who earn additional cash, but not enough generally to cover equipment and operating costs. As populations increase, trapping's share of the economy will decline, as there is an upper limit to the resources available. This indicates that where wage employment is available, it is preferable to trapping, given the low returns to trappers in most areas. The strongest pattern that occurred was that the participation in trapping declined in the younger age groups. A survey of Fort Simpson school children indicates only 1% expressed an interest in trapping as a career. The present 20- to 30-year-old age group, males only, has a 15% participation rate. The careers chosen by the school children are similar to those of southern Canada. Trapping forms a small part of the overall Territorial economy, while youth unemployment is growing rapidly.

Again, that's not our poll! If you have difficulty with it, you'll have to take it up with the Government of the Northwest Territories.

Corky Peterson (Manitoba Registered Trappers' Association): The only difficulty I have with that is the statistics. You are very adept, Michael, at quoting statistics. The great thing about statistics is that they can be very well manipulated. For example, two years ago I had two non-resident moose hunters come up to my lodge, and they shot two moose. The next year clients wrote and asked me what the hunters' success ratio was. I told them it was 100%--I didn't lie to them, but I didn't tell them anything either, did I?

Michael O'Sullivan (World Society for the Protection of Animals): What you're suggesting, then, is that the two government studies I quoted are poorly based?

Corky Peterson (Manitoba Registered Trappers' Association): I can't really respond to that. All I can say is that I am aware of how easily and conveniently statistics can be manipulated.

Rick Morgan (Ontario Federation of Anglers and Hunters): I would like to endorse what the first questioner, April Maurer, had to say. There is room for us all. It bothers me greatly that this Conference is becoming too confrontational. I don't think that's necessary at all. I think that hunting and trapping naturalists and non-hunting and non-trapping naturalists can all work together for the betterment of wildlife across Canada.

I wish to challenge something Martin Edwards said. He pointed out an imbalance, in his opinion, in the Ontario Wildlife Branch budget and stated, quite clearly, that he felt a larger fraction of the current budget should be shifted to the support of non-game species. I don't think the answer is to take the current dollars and reprogram them. The answer is to get more dollars. The Wildlife Branch budget in Ontario, for example, is certainly much lower than the total of the licence fees collected from hunters, the royalties collected from trappers, and the sales tax on the products that they buy to carry out their chosen recreations. Let's have those that don't hunt and don't trap come together with those that do hunt and do trap. Let's go jointly to government and convince Cabinet to give us more dollars for all of our wildlife programs. Let's not fight over what's already available!

Martin Edwards (Royal Military College of Canada): I sympathize with your viewpoint, namely, that the resources necessary to manage are low enough, with only a $20 million a year budget. But that doesn't mean that the budget is fairly distributed now! It's out of balance, at least in Ontario, and it is inappropriate to continue that way until sometime in the future when you might get the support that you need to get more money. Start shifting it now with the program, and you will get the support from those you are doing it for. I agree that you need more money, and more money will come once it is seen to be more fairly distributed.

We can also very much agree on working together on it! You didn't hear me say anything against hunting, trapping, or fishing. I would suggest to you, however, that if you want management for moose in order to produce an improvement for all sorts of other species, let's instead manage for all other species, and then the moose will be OK.

H.A. Clarke (Canadian Wildlife Service): I would like to say that this really is a public consultation process. There is a tremendous debate going on here. I hope that we can continue to respect one another's views, even though they may be different. It is useful to wildlife managers that are in the audience to hear what is going on here, and I think we may get some rather useful products out of this session.

Wally MacGregor (Retired biologist): I want to say that I agree with Professor Edwards that, in general, most wildlife agencies should be giving a lot more attention and support to the non-consumptive users. I'm both a non-consumptive and a consumptive user. The two are not mutually exclusive. When I go fishing, I may look at Rhinoceros Auklets, murres, puffins, and Merlins. When I go hunting, I may look for yellowthroats. I think I spend about 10 times more days on non-consumptive recreation than on consumptive recreation.

I want to take exception with one thing Professor Edwards said regarding wildlife agencies trying to obtain maximum sustainable yield. I do not know of any wildlife agency, at least in western North America, that does that. I think they've been trying to obtain optimum sustainable yield, depending on how you define the term. I know that holds certainly for California, Oregon, Washington, Arizona, British Columbia, and Alberta.

Tom Wood (BC Wildlife Branch): I'm also a hunter and a naturalist, and I don't see any contradiction in being both. In the world today, when resource decisions and trade-offs are being made, resources are evaluated. I agree that wildlife has an intrinsic value. But when you're discussing the value of a particular stream or a particular block of timber with a hydro engineer or a forester, you need to have hard, usable values. So I think it's important that we recognize a need to broaden wildlife management programs in North America. But I would ask that it not be done at the total expense of the traditional uses that have provided, and still do provide, the bulk of the evaluation that's so important in making those trade-off decisions.

Jim Inder (Newfoundland Parks, Recreation and Wildlife): Speaking as a person who has some responsibility for game management, we tend to think of non-consumptive and consumptive uses as mutually exclusive. Also, we tend to think that we, in the provinces, have particular programs for each. That's true to a large degree, but I'd like to give you an example of how it can work both ways.

Like most provinces, we in Newfoundland have various programs that are largely oriented towards game species. In general, however, I think our thrust is for all wildlife and its habitat. I think that's true in all of Canada, particularly since 1979, when we had as our conference theme in Regina, "Habitat is the key." Habitat is non-selective to a large degree--if we try to save most habitat, we will save habitat for other species. On the Avalon Peninsula of Newfoundland (where next year's conference will be held) in the late 1950s, we had a small herd of 50 caribou. Since that time, through a large amount of effort--financial, protection, and education--we have raised the number of caribou in that herd to over 5000. During that 30-year period, we probably averaged only 100 licences, maybe 150 at most, for consumptive use. In recent years, one of the more popular aspects of that caribou herd is the fact that it has spread out into areas where people are, which is relatively unusual for caribou in most of North America. I hope you get a chance to see those caribou next year. The point that I'm trying to make is that a lot of our programs, even though they may be designed for consumptive use, do have a non-consumptive spin-off.

Fred Bunnell (University of British Columbia): It is obvious that there are dynamic tensions in the way we use the wildlife resource. To some extent we're arguing about the way we intervene in the depth of the wildlife resource. But there's an undercurrent that bothers me, and the undercurrent is that, while we're sorting out those tensions, the last thing we want to do is totally undermine the legitimacy of another use. There are two reasons for that. The first one is that part of our conservation ethic argues the intrinsic worth of all species. If we can't even respect the intrinsic worth of other people's viewpoints, it's going to be very difficult to convince others we recognize the intrinsic worth of other species. But there's a far more important reason. We need the multiplicity of uses to maintain the resource. To maintain the support, we need the multiplicity of support. We need the multiplicity of funding. We need the diversity of views and visions. We need the diversity of ways of learning. April Maurer said that there's room for us all. There's also need for us all if we're going to maintain the wildlife resource! There are nine elements in the wildlife policy guidelines. The one we did worst on was maintaining wildlife habitat. We need to show signs of maturity and talk about the ethics, the philosophy, and the morals of how we use our resource.

Tom Crowley (Federation of BC Naturalists): There are a lot of buzzwords used in a conference like this. The Mayor of Victoria stated that we were "stewards" of the wildlife in British Columbia and "stewards" in a global wildlife context. This term seems to foster an illusion not only that we know what we're doing out there, but that we should be domesticating the entire planet. Then there is the "non-consumptive" and "consumptive" wildlife notion, which needs no further characterization. The word "sustainable" has been creeping in a lot in recent years. Wildlife managers know it well, and the Brundtland Report has highlighted this word. We have a "sustainable development," which in my view is a contradiction, but nevertheless is being used often. A buzzword that has been implied here is the idea of carrying capacity, that there is a maximum permissible load that we, as a species, can place on ecosystems. If the habitat and wildlife populations are decreasing, and if the human use of those ecosystems is increasing, then something has to give. I suggest that there is a cultural carrying capacity in which our behaviour requires drastic modification so that the uses that we place upon that environment are compatible with the idea of sustainability. We have to actively promote non-consumptive use, because that may well place the least load on the ecosystems that we seek to sustain.

Don Simkin (Ontario Wildlife Branch): Martin has left some misleading impressions. The Wildlife Branch is a part of the Ministry of Natural Resources. I think that we have a fairly well-balanced program for various recreationists and a fairly sound program with respect to taking into consideration environmental concerns. Just recently we've added another 57 parks to our parks system. We have 270 parks that cover some 6.3% of the province, and there has been more or less a dedication of that park resource to the non-consumptive users. The Wildlife Branch and the Ministry of Natural Resources are all part of the same team. We practise integrated resource management in Ontario. We've got a field staff of some 500 people. Our fish and wildlife people are making inputs into timber management plans, and we're looking after eagle nests, trying to identify Osprey nests, trying to identify heron rookeries, etc. We have a system of conservation authorities and conservation areas in southern Ontario, primarily in the near-rural, near-urban areas. For various reasons, consumptive recreation is not allowed in most of these areas, but there's a lot of emphasis on providing opportunities for non-consumptive users. We have a wetlands program--not a waterfowl habitat program. As far as I'm concerned, it's second to none in Canada. We're spending over $3 million a year on this program. We have a community wildlife involvement program in which we're showing leadership in Canada. This provides several hundred thousand dollars to user groups to develop wildlife habitats to increase the opportunities for wildlife. Those dollars are as available for non-consumptive users as they are for consumptive users.

Martin Edwards (Royal Ontario Military College): I selected information for my presentation based on the topic of this Conference. I agree that there are lots of agencies that are doing things right. My point was concerning the balance within that one part of the agency. I was asked specifically to make the strongest case possible for the increase in support for non-consumptive users. I believe I have done that. There's a long way to go with many wildlife agencies in Canada in responding to the need and, in particular, the fact that women, which constitute more than 51% of the adult population, are being short-changed.

Jack Lacterman (Retail Furs): Corky, you're on the production end, and I'm on the retail end. I've been in the business for 55 years, and I know all about manufacturing of furs. There has never been a use for the hair seal--I've never seen it in manufacturing or retailing. All those skins that are taken are sent to Europe and made into dolls. They are never used in the fur industry for making a fur coat. The seals that have been harvested by the United States, Russia, and Canada are a fur seal, not a hair seal. We have been successfully harvesting that seal for the last 30 or 40 years. They were depleted years ago by the sealing vessels that used to come to Victoria, to the extent that they almost became extinct. All three governments now control and conserve the crop.

Everyone seems to be stressing the point that you should not use furs for making a fur coat. My dad was from Russia. He used furs to keep people warm. The animals were used for food for the family and also for keeping them warm. We're still doing the same thing with the natural furs that we are raising by trapping or on ranches. It's an industry that you must not kill. People are raising a lot of money telling poor people who don't have lots of money that they must not kill these animals or they must not wear the fur coats. You might just as well say that they've got to stop eating beef.

FLOURISHING PUBLIC WILDLIFE: THE COMMONS CONTROLLED

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Introduction

There exists a confusion that equates "public ownership" with "the commons." This confusion has led to the view that, because wildlife in the commons must be suffering and cannot be managed, it is necessary to turn wildlife over to private ownership for management and profit (e.g., Roseborough 1986).

Few confusions could be more damaging to wildlife. The confusion ignores the great achievements of North American wildlife conservation and assumes that, today, wildlife in North America is treated as a "commons." It is not. Nor has wildlife been treated here as a "commons" for over 70 years. However, before that wildlife was indeed treated as a "commons," which led to the expected tragic results.

Tragedy of the commons

When Garret Hardin published the "Tragedy of the Commons" in the 13 December 1968 edition of Science, followed almost a year later by Beryl Crowe's (1969) response, "The Tragedy of the Commons Revisited," they popularized a notion that deserves critical attention. It is the notion of uncontrolled access to a public good. Hardin used a system of pasturing in Great Britain to illustrate the concept. He referred to a piece of ground, the commons, to which villagers had access to graze their stock. This was the last vestige of land not claimed by the feudal system in personal ownership by the king to be given to his vassals in return for loyalty and service. Crowe stated that the commons was an expression of British common law predating the Roman conquest (54 BC). However, the Anglo-Saxons conquering Britain (sixth century AD) had similar laws that allowed "freemen" access to land not held in private ownership. It is this free, uncontrolled access to public land and its resources the feudal system all but abolished, beginning with the Frankish Merovingian kings (seventh century AD) on the continent (Plochmann 1979), to be fully extended to Britain by the Norman conquerors after 1066 AD (Lund 1980).

The essence of the tragedy of the commons is that each herder perceives that adding one more cow gives him a benefit of 1, and distributes the cost among all herders (n), so that the cost to each is only 1/n. His gain is much greater than his neighbour's loss. Because each economically rational herder thinks this way, adding another cow, and another, and another, the commons becomes overgrazed, and, predictably, all lose out. Adam Smith's "unseen hand" and laissez-faire led not to an increase in the public good, but to very public disasters. The essence of the commons is not public ownership, but the absence of controls over exploitation, an absence of responsibility for care, planning, and restitution.

The "tragedy of the commons" was acted out on North America's wildlife remorselessly in the 19th century. Species once abundant were exterminated or reduced to tiny remnants. This is recorded in some detail by Hornaday (1913), Hewitt (1921), Mathissen (1959), Hampton (1971), Lund (1980), and others, such as the reports of the Canadian Commission on Conservation from 1910 to 1919. These sources give important historic information alluded to below. The commons was a consequence of more than public ownership. It was maintained by a conviction in the superabundance of nature, and by an abhorrence for controls over private initiative, thus giving free reign to laissez-faire (Smith and Witty 1970, 1972). These were products of the European immigrants' rejection of laws and social norms unduly stifling to a "freeman's" way.

It is instructive to reflect on the final decades of the 19th century. Wildlife was food and clothing for natives, trappers, settlers, explorers, army and police units, and labour gangs building railways, operating mines, and herding cattle. As the railways linked the resources of the west with the markets of the east, an unparalleled destruction befell wildlife as market hunters, mostly whites, but also natives, killed wildlife for its meat, hides, furs, and feathers. Pigs were driven into nesting colonies of pigeons and waterfowl to fatten on young and eggs. Punt gunners and nettlers collected in masses waterfowl, shorebirds, and songbirds. Americans were connoisseurs whose "jaded palates" demanded nearly everything that walked, crawled, or flew to be on restaurant menus for conspicuous consumption (Ranhofer 1893). Living birds replaced clay pigeons in sporting shoots in the east, while in the west the destruction of wildlife, buffalo in particular, was a military objective to solve the "Indian problem." Wildlife could not last, and it didn't.

It was in response to the destruction of wildlife by unfettered exploitation, a true "tragedy of the commons," that North America's system of wildlife management took its shape at the beginning of this century. In an epic battle stretching over 60 years, a small North American elite placed effective controls over the exploitation of public resources, terminating the commons and reversing the tragedy. It became the most successful system of wildlife and nature conservation ever to arise from the hand of man. A phoenix did rise from the ashes of America's dead wildlife.

Beginnings of wildlife management

There were many efforts to save wildlife in its blackest hour. The despair cannot be better illustrated than by the fact that the US Cavalry finally became the protector of remnants of wildlife in a few national parks (Hampton 1971). The army, once bent on wildlife destruction to subdue Indians, made an about-face and became a protector of wildlife as of 17 August 1886. On that date, Captain Moses Harris rode into Mammoth Hotspring of Yellowstone National Park at the head of troop "M," 1st US Cavalry, and on 20 August 1886 relieved superintendent D.W. Wear of his duties. That date was the first day of modern wildlife management in North America. Not that there were not many earlier efforts at control and protection. What distinguishes the army as a manager of wildlife are the decisions of the first three captains, the "austere, correct, unyielding" Moses Harris, the indomitable F.A. Boutell, and the able George S. Anderson, to protect what was left of Yellowstone's great natural wonders. Their decisions, closely watched and defended by a US congressman named Theodore Roosevelt, foreshadowed what was to become policy in the management of public resources continent-wide some 30-40 years later. Whatever the contributions of others, the publicly owned national parks were the testing grounds for practices for preservation and controlled development, i.e., conservation as perceived by the future Commission on Conservation (Smith and Witty 1970). Without the decision to place under military control a fledgling system of national parks, this great contribution of North America to occidental culture might not have survived infancy (Hampton 1971).

Four giants of North American natural resource conservation stand out above all others. These were, on the US side of the border, President Theodore Roosevelt and the capable, farsighted chief forester of the United States, Gifford Pinchot. On the Canadian side it was Prime Minister Sir Wilfred Laurier and the man he appointed to chair the Commission on Conservation, the remarkable Clifford Sifton. These men made possible the fruition of the aspirations of those writers, naturalists, sportsmen, administrators, and politicians that recognized only too clearly the need for an end to the commons and that saw ways to generate control. In close co-operation, commissions on conservation worked on both sides of the border, so that Canada and the United States emerged with all but identical policies to conserve and protect wildlife. Their work ended by 1919. On the shoulders of the four giants came to stand the work of the great Aldo Leopold (1933).

A brief historic perspective on North American conservation

North America's wildlife conservation is based on three primary policies that support the superstructure of laws, regulations, beliefs, and attitudes pertaining to conservation. These are:

(1) the elimination of markets in the meat, parts, and products of game animals, shorebirds, and songbirds, i.e., of vulnerable wildlife, while retaining markets in furs of the less vulnerable furbearers. History had just demonstrated in excessive redundancy how quickly a price on dead large mammals, waterfowl, pigeons, shorebirds, and songbirds could decimate stocks of these animals, while viable populations of furbearers could be retained.

(2) the allocation of the material benefits of wildlife by law, not by the marketplace, birthright, land ownership, or social position. Allocation of surplus wildlife by law is a complementary policy to the first. This policy makes every citizen a de jure "shareholder" in wildlife in the United States and Canada, and a de facto shareholder in most jurisdictions. It generates a sense of proprietorship in those that regularly avail themselves of their allocation of wildlife.

(3) the prohibition of frivolous killing of wildlife. This policy is the least visible one. It prohibits the waste of wildlife once such is killed; recognizes subsistence hunting as a priority; and permits the destruction of noxious wildlife. On sport or trophy hunting, both of which are unpopular with the American public (MacDonald 1987), this policy is ambiguous. Lund (1980) is explicit: American wildlife management arose because of those that exploited wildlife for entertainment, the sportsmen. Aldo Leopold (1933) made recreational hunting an integral part of his definition of game management. The literature preceding him (i.e., Commission on Conservation 1910-1919; Hewitt 1921) emphasizes that it would be better to sell wildlife for "sport" than to slaughter it for sale. That is, it has been historically recognized that restrained hunting for sport, which confers desirable social qualities to the hunter, was a worthy goal. In the words of Theodore Roosevelt, as quoted on the dust jacket of the seventh (1977) edition of the Boon and Crockett Club's "North American Big Game": "The chase is among the best of all national pastimes: it cultivates that vigorous manliness for the lack of which in a nation, as in an individual, the possession of no other qualities can possibly atone."

This third policy is eroded by the notion that hunting is killing for "sport" or "fun," and that wildlife is consequently a "recreational" resource. Hunting has therefore been attacked as a frivolous blood-sport, as an unworthy exercise of needless destruction and cruelty, and as a degradation of those that hunt (Amory 1974). Current public views do not support killing wildlife for sport, but do support such killing for food (MacDonald 1987).

In practice, these policies insured that the killing of wildlife was economically a liability. Not only is it costly to legally kill wildlife, but it must not be abandoned under penalty of law. To hunt requires unrecoverable investment in equipment, effort, and time, which has deterrent value, but it also generates requests for services and goods at every step.

From the outset, legislatures granted some exceptions to these basic policies. Texas in 1925 gave *de facto* control over wildlife to landowners with a stiff trespass act, allowing allocation of wildlife by the pocketbook, thereby denying many *de jure* shareholders in wildlife access to their resource. In the Northwest Territories of Canada, the sale of wildlife meat remained legal. There were special-case exceptions added in other provinces and states.

Achievements of North American conservation

The three primary policies and public ownership of wildlife not only brought about the return of wildlife, but created the most successful, economically most productive system of wildlife conservation. These achievements are outlined below.

The recovery of wildlife

Wildlife had been decimated over most of the southern and central parts of the continent (Hornaday 1913; Hewitt 1921). Today there are again about 30 million big game animals in the United States and Canada (Schmidt and Gilbert 1978), despite more than 3 billion head of livestock (Pimentel *et al*. 1980), about 270 million people, and 150 million firearms, or more, in private hands. Bison, musk-oxen, pronghorned bucks, elk, and Wood Duck returned from the edge of extinction; most big game species increased. No longer are wild large mammals regarded as so many dollars on the hooves, nor are songbirds and shorebirds regarded as luxury food in restaurants, as described in detail in Ranhofer's (1893) treatise on culinary art. For the Passenger Pigeon and Eskimo Curlew, the prohibitions on markets came too late.

Economic gain

The recovery of wildlife led to a large, labour-intensive service and manufacturing industry that sprouted about living wildlife (Filion *et al*. 1983; Bailey 1984; Kruckenberg 1987). The elimination of wildlife markets increased the economic return from wildlife. This is at least twice that of the German wildlife management system based on private control of wildlife (Table 1), and the number of jobs created is about threefold. In 1985, some $69.4 billion (expressed in Canadian dollars) were spent in the United States by the public on hunting, fishing, and wildlife viewing. This amounts to $19 000 per square mile of the United States.

Table 1 shows some wildlife statistics between East and West Germany and some North American jurisdictions allowing a first comparison despite differences in gathering statistics. West Germany gets about half the monetary value from wildlife compared with Wyoming or Wisconsin. Expenditure per hunter in West Germany is almost $2500 per hunter; it is about $860 per resident hunter in Wyoming. West Germany paid out about $68 million in wildlife damages (Wyoming $0.3 million). Tourist hunters are not encouraged in Germany. There were some 2300 non-residents among 265 000 hunters in Germany (Wiese 1986), and 248 000 among 478 000 in Wyoming (Kruckenberg 1987). Non-consumptive expenditures tend to be three to four times hunting expenditures in Canada (Filion *et al*. 1983) and Wyoming, but are not considered by the Germans, as tourism is not wildlife-related as it often is in America. German wildlife is crepuscular or nocturnal, particularly where well-managed (in overpopulated areas roe deer become diurnal; Schaefer 1982). Wyoming does not adequately account for the manufacturing sector benefits from wildlife; Canadian data indicate that this sector's benefits are larger than those of the service sector (Filion *et al*. 1983). In Europe, 1000 hunters generate 16 jobs (Wiese 1986); in Alberta, it is at least 58 (based on 11% of 2.23 million citizens being hunters, and 14 192 jobs). Filion *et al*.'s (1983) figures suggest about 38 100 full-time wage-earning jobs, plus some 6000 jobs such as those of working owner, partner, or family helper, per billion dollars of wildlife-related expenditures.

Table 1. Comparison of some Canadian, US, and German figures on wildlife economics and production (upgraded from Geist 1988).

Location	Big game Numbers (millions)	Big game Biomass (kg/km^2)	Small game biomass (kg/km^2)	Income (millions $Can.)	Area (km^2)
Alberta	0.40	99	29[1]	725	661 185
British Columbia	0.82	118	24	540	948 596
Newfoundland	0.13	313	63[2]	60	404 517
Wyoming	0.92	294	-	1250	253 596
Wisconsin	0.71	348	110	650	145 438
West Germany	1.88[3]	207	9	655	248 630
East Germany	0.56	133[4]	15[5]	-	108 178

Notes:

1985 licence sales: Alberta 146 000 wildlife certificates (291 351 big game tags were sold); British Columbia 155 000; Wyoming 473 000; Wisconsin 849 000; Newfoundland 75 000 eligible hunters, 50 000 applicants, 15 000 licences sold; Germany BR 265 000; Germany DDR 41 000.

Share per hunter: Germany BR 2.99 big game/hunter, 12.59 small game/hunter; Germany DDR 6.0/12.0; Alberta 0.38/2.0; Wisconsin 0.18/5.4; Newfoundland 0.22/30.00.

Jobs/1000 hunters: Alberta 58; Newfoundland 35; Germany BR 16.

[1] Based on estimates of breeding populations of furbearers, small game, waterfowl, and upland game birds from 1984 Fish & Wildlife Resources report.

[2] Based on 1.5 million rabbits killed x 2 x 1.5 kg, plus half that in grouse = 6.75 million kg/land area.

[3] Of this, 1.7 million are small roe deer (*Capreolus capreolus*).

[4] Official plan limit; this is exceeded by about 3%.

[5] Based on 1984 kill of approx. 200 000 small game (x 2 x 4 kg divided by land area).

The profession of wildlife management

A system of management and conservation arose based on state-employed wildlife managers responsible to elected representatives at the state, provincial, and federal levels. In support, there grew institutions of teaching and research, and a society to advance the new profession of wildlife management. It provides refereed journals, accreditation, and representatives to bodies dealing with conservation (see Wildlife Society Bulletin 15(1), 1987). North America set the model for others, as evidenced in the creation of national parks, the introduction of university curricula and research in wildlife biology, and the international use of North American wildlife experts as consultants.

Public involvement with wildlife

A large number of conservation societies arose that organized interest in wildlife locally and united at the federal, provincial, or state levels to give political expression to their views. The continental scope is illustrated by societies common to the United States and Canada. With a population of 400 000, Wyoming has 104 conservation societies. Canada has some 360 registered conservation groups, 100 of which are represented by the Canadian Nature Federation. There are societies to raise funds for elk, bighorns, grizzlies, turkeys, Ruffed Grouse, and waterfowl, to regulate trophy competitions, to restore habitat, and to play watchdog on governments. The sheer number of these non-government organizations (NGOs) is a North American phenomenon.

Taxes for wildlife

Americans taxed themselves on behalf of wildlife (Pitman-Robertson, Dingell-Johnson, and Fish and Wildlife Conservation Acts of 1980; Drabelle 1985b). Canadians pay for wildlife from general taxation or special funds created from licence sales (i.e., Alberta's Bucks for Wildlife Fund).

Habitat conservation

North Americans created an extensive system of protected areas for wildlife, such as national parks (Hampton 1971), wildlife refuges (Drabelle 1985a), and ecological reserves, and made wildlife an object of management on public lands. Societies formed that acquire land for wildlife or protect habitat, such as Habitat Canada and the Nature Conservancy. They encourage private landowners to preserve wildlife habitat. The Armed Forces continued their traditional role as protectors of wildlife (Hampton 1971) on military reservations, giving to officers formal conservation responsibilities. New programs arose to create wildlife habitat on agricultural land, such as the Conservation Reserve Program in the United States.

International treaties

North Americans negotiated international treaties to protect wildlife, beginning with the 1911 Fur Seal Treaty (Weber 1985). Better known is the Convention for the Protection of Migratory Birds (1916) between

Great Britain and the United States (Hewitt 1921; Chandler 1985). Unfortunately, the Fur Seal Treaty is under attack by the Humane Society of America, and the fur seal may again be subject to sealing on the high seas. The loss of this treaty would amount to a regression.

Large predators

North Americans preserved large predators. That is a great achievement compared with the European scene. We do have viable populations of wolves and black, grizzly, and polar bears. Great public concern surrounds grizzly bears in Yellowstone National Park (Craighead 1979; Knight and Eberhardt 1984; Povilitis 1985, 1986), and the reintroduction of wolves is being contemplated in Wyoming and encouraged in Wisconsin (see Wisconsin Natural Resources 4(3):38(Suppl.), 1987).

Law enforcement

North Americans developed an inexpensive, civil, and fairly effective system of wildlife protection that allowed wildlife to recover, despite much opportunity for illegal killing and ready access by the public to firearms. This can hardly be grasped without a comparison to the German system of policing for wildlife.

Germany, with a retail market in venison, is thorough in wildlife protection. German law (Bundesjagdgesetz 28. 9. 1976, #25) makes every lessee or owner of a hunting territory a deputized policeman responsible for wildlife protection. The law allows him to use firearms in protection against armed poachers. It allows him to shoot to kill in cases of justifiable doubt to his security (Nuesslein 1983). There are about 65 000 of such armed wildlife protectors for about 91 000 square miles of land open to hunting (23.574 million hectares, divided into 40 000 hunting territories; Wiese 1986). In addition, there are some 1000 professional hunters (Wiese 1986) employed full-time to manage and protect hunting leases of clients, whereas on state land about 5000 foresters are charged with the duty of wildlife protection. Moreover, any one of the remaining 195 000 of Germany's registered hunters can be so deputized (Nuesslein 1983). The foresters and professional hunters not only carry long-arms (much more effective than regular police weapons), but may be accompanied by dogs. All wildlife protectors are allowed to carry concealed handguns. In addition, regular police forces are responsible for wildlife protection. With stiff food protection laws, food inspectors with policing powers to control the flow of wildlife from kill to the retail market, and stiff gun control laws (Balse 1968; Nuesslein 1983; Wiese 1986), Germany has succeeded in keeping wildlife and a retail market in venison.

By comparison, in the Province of Alberta, 115 unarmed wardens guard wildlife on 255 285 square miles of land.

The costs of wildlife protection in Germany are beyond calculation. Surveillance alone is at least 300-fold greater; although most is done by unpaid deputies, there are still about 40 times more publicly employed wildlife protectors and about 10 times more paid privately.

Policing on behalf of wildlife is terribly costly, as shown in McKay's (1987) account of the unsuccessful anti-wildlife-trafficking Operation Falcon. It would have been safer for falcons and cheaper for taxpayers had there been no "loophole" to sell falcons legally.

Although the results of the North American system of wildlife conservation are outstanding compared with management of private wildlife in Europe (and also in Texas), political accountability and the commensuration of differing convictions make it a difficult system to live with for a professional wildlife manager. Managers of private wildlife, not accountable to the public, tend to escape all this.

Dangers to wildlife conservation

The great success of North American wildlife management and conservation, based on public ownership of wildlife, is now endangered by several developments.

Trafficking in dead wildlife

Special-interest groups have begun distorting legislation in Canada to allow trafficking in dead wildlife. These groups aim to create a venison market in North America as well as take advantage of a fraction of the public disaffected with western medicine, to which parts of dead wildlife may be sold as folk medicine (Hughes 1986). They aim to raise wildlife in agricultural fashion (Bannerman and Blaxter 1969; Yerex 1979) and to sell it in retail outlets. Oriental markets currently pay well for the velvet antlers, tails, and sex organs of deer, and the gall bladders, paws, claws, teeth, and milk of bears. "Bear ranches" are being researched (*The Asian-Albertan Exchange Newsletter* 2(3), 1985). I have dealt with this in detail in Geist (1988).

These developments remove the most important protection from wildlife. The criminal element, which already has taken advantage of the trade in wildlife parts, is very large compared with the amount of wildlife available. It is a problem of scale. Difficult as it is now to apprehend wildlife law violators, with a multiplicity of retail outlets and facilities to launder illegal wildlife, the situation becomes hopeless. Only about 1% of wildlife violations are reported; only one in five is successfully prosecuted (Boxall and Smith 1987). Doubling policing efforts would thus result in a 0.4% conviction rate. With illegal kills of the same order as legal kills (Spalding 1987), any encouragement to kill wildlife illegally for profit would undermine all efforts to save common, let alone rare, species. Investigative reporting uncovered a growing black market in "wildlife medicines" in North America (Cowan 1987). Close contact with law enforcement personnel on both sides of the border is currently exposing a grim, even macabre, picture. A sting in the United States exposed the presence of not only wildlife parts along with contraband, but also human parts. That some parts of humans and bears are very difficult to distinguish even for medical anatomists should be noted here.

Game ranching

Game ranching is a real threat to the genetic integrity of North American wildlife. Game ranching cannot flourish except by introducing native species to, and cross-breeding them with, exotics. North American large mammals, because of a quirk of history, are not resistant to either competition or the diseases of Eurasian counterparts, as I explained in detail elsewhere (Geist 1985b, 1988). Parasitologists warn of disease and parasite introductions (Holmes 1982; Samuel 1987). That exotics can be permanently kept behind fences is certainly not borne out by experience here or abroad (Massey 1986b; Rennie 1986). At the best we face creating genetic pollution.

The major proponents in Canada for game ranching are agricultural agencies at the provincial and federal levels. The current legislation in Saskatchewan, British Columbia, and Alberta is not merely a cavalier treatment of conservation, it is a breach of the Guidelines for a Wildlife Policy in Canada, as well as the World Conservation Strategy.

Trophy ranches

Game ranching threatens not only predators, genetic pollution, and the introduction of more foreign diseases (Klein 1980; Pruitt 1985; Geist 1988). Its proponents also foresaw the conversion of public land into large game ranches, to create "trophy ranches" where deer, bred for antler production, are sold to trophy hunters, as happened in New Zealand (Massey 1986a), and as a means of *de facto* elimination of native hunting rights (Kahdren 1983).

Another threat is the attempt to give wildlife over to private exploitation, to raise it for trophy hunting on "Texas-style game ranches" (Roseborough 1986; White 1987). The famous German system of wildlife management is *de facto* game ranching of this type. It is production oriented to favoured species, with extermination of large predators and the severe culling of small ones, artificial feeding, agricultural-type habitat manipulation, introductions of non-native species and strains, and genetic manipulation of wildlife (Beninde 1937; Draskovich 1951; Stahl 1979; Nuesslein 1983; Eggerling 1983). While delivering only fair wildlife production and economic return (Table 1), the German wildlife management system is a poor *conservation* system and reflects a history of autocratic rule. It has lost support among the German public (*Der Spiegel* 37(4):91-100, 37(4):102-105, 1983); it is a system struggling to adjust as hunting in Europe becomes less popular (Schroeder 1986). In view of this, it is noteworthy that the private system of wildlife management is finding an appeal among some North American managers. Is it because privately sold hunting opportunities are profitable--even though the American public condemns such "sport" and "trophy" hunting by a wide margin (MacDonald 1987)? Is it that proponents simply do not know in adequate detail the consequences to conservation of private wildlife management in Europe or in Texas? The claims on behalf of conservation by trophy ranching, or African-style game ranching (Dasmann 1964), and various schemes to farm and market dead wildlife are quite fallacious or ambiguous at best (Ehrenfeld 1974, 1981; Geist 1985a, 1988).

Private control of wildlife

Historically, the allure of wildlife is so great (Stahl 1979) that throughout western history the powerful have repeatedly abrogated wildlife from public to private use. It happened in New Zealand in 1977 (Caughley 1983), in Texas in 1925, in Norway in 1899 (Swenson 1983), in England in 1066, and in the Frankish kingdoms in the seventh century AD, with the Merovingians taking advantage of a loophole in Roman law (Plochmann 1979). That ushered in more than a millennium of tragedy for Europe's commoners and wildlife alike (Roedel 1971; Stahl 1979; Lund 1980).

Are current attempts in North America to gain private control over wildlife the beginning of that historically common expropriation?

The elite uses wildlife for "conspicuous consumption" (in Veblen's 1899 terminology), as a symbol of its social status (Lund 1980). Hunting became a preoccupation that, historically, took on dimensions large enough to bankrupt rulers and generate peasant revolts (Stahl 1979). Resentment and envy are then directed against the privileged; wildlife becomes a symbol of detested privilege and power. Some, unhappy with the curtailment of personal freedoms, kill wildlife, less for gain than to spite the privileged. Poaching now, however, has the support of the public, and poachers become folk heroes (as was Robin Hood). The elite, guarding its privileges, tends to protect its wildlife even with force of arms. This does lead to bloodshed (Ausser 1947). In the long run, an alienated public, unpractised in regarding wildlife as its own to cherish, use, and protect, loses interest (Lund 1980; Swenson 1983), or exterminates wildlife the moment the powers of land and wildlife owners slacken, for which Ausser (1947), Roedel (1971), and Stahl (1979) cite European examples. The ruthlessness and brutality with which the mighty have protected their wildlife are, historically, startling. Unfortunately, this confrontation is not just ancient history; there is evidence that it is beginning to happen in New Zealand (Massey 1986b; Rennie 1986), and armed patrolling against trespassers is current history in the southern United States.

The losers

Not only wildlife and public stand to lose from the current drift of events, so do the service and manufacturing industries. A policy giving market value to living wildlife generates more income than one giving economic value to dead wildlife, even with a cautious interpretation of German, Canadian, and US figures. Not economically efficient but inefficient exploitation must be the goal in conservation. To fish inefficiently is to use a dry fly; to fish efficiently is to use explosives.

International wildlife markets are not likely to serve exporters. Wealth is created less by export than import replacement (Jacobs 1984). Venison imports generated over 1000 fallow deer ranches in Germany by 1980 (and pitted conservation against agricultural interests; Ueckermann and Hansen 1983), but led to a loss of deer ranches in New Zealand (Bryant 1986) and in China. North Americans have shown how policies ensuring local consumption of wildlife generated wealth while conserving nature. It's a subject worthy of attention.

Conclusions

The North American system of wildlife conservation, based on public ownership of wildlife, is the most successful in history. Not all jurisdictions in North America have done equally well in conserving wildlife, but calls by frustrated hunters and hopeful traffickers in dead wildlife to turn wildlife over to the private sector would be a cure much worse than the disease. This option has in the past served neither the welfare of wildlife nor that of the public. It is essential that the policies that served wildlife so well in North America be maintained. These are:

- public ownership of wildlife;

- no trafficking in vulnerable wildlife;

- allocation of surplus wildlife by law; and

- no frivolous killing of wildlife.

Had we been able to hang on to our legislative achievements in conservation, there would be no need to refight an 80-year-old battle that was then thoroughly won. We could now face the avalanche of pollution threatening wildlife and the health of consumptive users of wildlife, as well as plan for the far-reaching conservation consequences of the greenhouse effect.

Will we learn from history?

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"DOES PUBLIC PERCEPTION REFLECT THESE REALITIES--IS IT GETTING ACCURATE INFORMATION?"

Garnet Anthony
CBC Radio
Edmonton

I address you as a broadcaster, as a host of a radio program, as one who has produced a number of wildlife documentaries both for radio and for television. A large part of the 30 years that I've been in the broadcasting business has focussed on wildlife. I've worked for a television series called "This Land," and a couple of years ago the Alberta Government initiated me into the Alberta Wildlife Hall of Fame for a lot of the documentary work that I've done.

I deal with a lot of biologists and wildlife managers. Wildlife is one of the few safe issues for broadcast journalists to take sides on. Normally, I have to be in the middle--I can't be for or against anything, I can only be the catalyst for discussion. But I can take the side of wildlife.

In general, people will tell you that they are in favour of wildlife. I've never heard any people say they hate wildlife. Some will say it's a nuisance or a bit of a problem, but no one really wants the animals all done away with. I can capitalize on that.

But where are all you people when wildlife has major problems? The public needs the scientific information, broken down in layman's terms, that you people have. You have all the information and yet somehow it's not getting out.

Misconceptions

There are a lot of misconceptions in the minds of people about what wildlife is, what wildlife needs, and where the information comes from. Let me give you an example. On occasion I get to talk to the class at the Northern Alberta Institute of Technology about broadcasting. I'm usually introduced as a broadcast journalist, filmmaker, or radio commentator. They also say that, apart from being a conservationist, I am a hunter. I am a hunter--I enjoy the sport, and whatever I hunt--principally moose and deer--I eat. It's the sport of hunting that was passed on from my grandfather to my father to me that led me in the direction of finding out more about prey species. I am very concerned about where wildlife is going. The question that I usually get from the students at the Northern Alberta Institute of Technology is, "If you are a conservationist, why do you hunt?" I wonder where their information comes from. The misconceptions that people have probably come from you and me.

Need for information in a crisis situation: Big horn sheep on Mount Allan

Before coming here, I thought about what I have done over the years when I have represented wildlife documentaries. Usually my approach is to put a biologist front and centre so that we have a pretty good database available. If there's a crisis situation--for example, if there are about 100 places left on the eastern slopes of the Canadian Rockies that are suitable for big horn sheep and that are slowly being done away with by man's industrial developments, ski slopes, mining, whatever, I rely heavily on people like Val Geist to give me information. I wish there were more people like him around that I could call on when a crisis situation arises, or even before a crisis situation arises. Val gave a perspective on this large, viable sheep herd on Mount Allan and what kind of impact there would be on that herd when the Olympic ski facility was built there. The world media focussed on the politicians saying, "Look at this wonderful facility." But where were the sheep? Who cared?

Most of the biologists and government employees were told to keep quiet. Fortunately, there are enough biologists in the government who phone me. There are certain reporters who you trust, knowing that if you give them some information it is not going to come back at you and get you into trouble with your director. I heard that a director of Fish and Wildlife in Alberta some years ago warned that if a particular outspoken biologist didn't shut his mouth, "we're going to have to get rid of him." So effectively he had his mouth shut! That's really unfortunate.

When we start off on our careers, we have all sorts of wonderful goals we are going to achieve, things we are going to stand for in life, in a career sense. We gain lots of knowledge by working very hard at university. We finally get the big office, a budget, and a staff. Then somewhere along the line we start to compromise. I think we often tend to lose sight of reality. What is the objective? What is it that you want to contribute throughout your entire working career? When it's all over and you look back, what do you want to say you left behind for society so it's a better place than when you first came on the scene?

Keeping the public and the media informed

Illegal reindeer transport

Some time ago, the Minister of Forestry, Lands and Wildlife in Alberta allowed 100 reindeer from the Northwest Territories to be purchased and brought down to southern Alberta without benefit of the necessary permits or veterinary checks. It was all done illegally! However, 30 of the animals died in transit, and it was thought that if the animals were sent back where they belonged, perhaps more would die. No charges were laid, and the proper paperwork was done retroactively, so the guy got away with it completely. The Director at the time was very upset, and I couldn't get anybody--the Minister, the veterinarians, the rancher--to say anything.

Since I am a catalyst in the information sense, I thought there was only one thing to do to make this whole thing public so the media could jump on it and perhaps even embarrass the Minister for the kinds of things he was doing (it turns out that the rancher individual who did this had a lot of political clout). So I got ahold of the head researcher for the New Democratic Party, which is now the official opposition, and I said, "These are the things happening as I see it, and yet I can't go to air, and I can't find anybody who is willing to talk about it." He copied my information, and his Leader in the House got the Minister responsible for this whole exercise up in the question and answer period for 12 minutes. All that information was coming out, the press gallery was there making notes, and then it was all over the place. Once there was a public utterance, then I could run with it. So the public then had more information.

Southern irrigation district improvement

I'll give you another example. It was one of the few times when I could see something positive happening for wildlife from my actions. This was a situation in southern Alberta where the biologists of the Fish and Wildlife Division were really beside themselves. I suppose it is an illustration of the kind of lack of support or the low priority that the Alberta Government gives its own fish and wildlife. This was the improvement to the southern irrigation district done with Heritage Trust money. They spent somewhere in the order of $700 million to upgrade the irrigation system. In the past they had seepage problems from the irrigation canals, which created little islands for wildlife. I'm talking about everything from the little gnats and bugs and so on that feed Sharp-tailed Grouse up to the big ungulates, the animals that are high profile. Alberta Environment and Alberta Agriculture were both involved. One was building some of the major waterworks, passing it down to the irrigation canals. But it was impacting on wildlife. Not once did these groups discuss what impact this project would have on wildlife. They were using Heritage Trust money to destroy wildlife habitat. They were stripping out the seep areas, stripping bush off the old irrigation canals, flooding areas, whatever.

I was at a seminar in Edmonton, and one of the Senior Executive members from the Fish and Wildlife Division came to me and said, "This is what's happening. All of this money is being spent, and we don't have a thin penny to spend for a study on the effects on wildlife. Is there anything you can do?" I thought, this is incredible. The public doesn't know what's happening, only that the water systems are being improved. I decided to make some phone calls and found enough biologists who were upset enough to talk to me. So I wound up doing a series of interviews with a biologist in the south, with the Director of Fish and Wildlife, with Agriculture, with Environment. I started putting it all together--this is the reason they are doing this; this is the impact; this is what else they have planned to do; these many more millions are being committed in that direction.

It turned out that there wasn't a lot of communication among some people who should have been talking to one another. After I had done this series, the Director of Wildlife in Alberta said to me, "You won't believe the numbers of interoffice memos going back and forth. It's really a sight to behold, and it's encouraging." Perhaps because of the media involvement in this, some of the "Bucks for Wildlife" money is earmarked in that direction. So now, at least, some consideration is being given to wildlife as they do more work in that southern irrigation district.

Whooping Crane problem

One of the problems that we have with information that's coming in, if it's a bit sketchy, is that we have a lot of inexperienced people in our business right now. I'll give you an example of something that came through a wire service, and this is dateline Saskatoon. It says:

> Waterfowl migrating to the Prairies to nest and breed this summer could be in trouble. Canadian Wildlife Service officials say they are concerned about the growing number of dry Prairie slews and reservoirs usually inhabited by the birds. There is even danger for birds like the Whooping Crane, which are just passing through and only expect a little Prairie hospitality, a federal wildlife biologist said Monday. "Whooping Cranes have regular spots to stop every spring and fall to rest and feed," said Brian Johns, "and if these locations are dry it forces them to unfamiliar areas where they may be in some danger." Habitat biologist Phil Taylor said the current water shortage is frightening.

This was the first report on the dry conditions and what was happening to the wetlands on the Prairies because of this drought condition. We had some relatively inexperienced people in the newsroom. They were not inexperienced in a news sense, but they had very little or no knowledge of wildlife requirements. Their reaction to this was, "What does all this mean? We have a lot of ducks, don't we? If we raise more, the Americans are only going to shoot them anyway. What's the big problem? Ducks Unlimited has taken care of this kind of problem, so why should we be concerned?" They didn't even understand the reference there to Whooping Cranes. They knew generally that the Whooping Crane is something that has a problem, but didn't know if they should be concerned about it.

The question is asked--and I know biologists wonder about this too--if the amount of resource that's spent on trying to ensure the survival of the Whooping Crane by building the flocks up to something viable so that someday they can sustain themselves can be justified. There is a perception in the media, generally, that perhaps some of that is misfounded, that there are other species that are in trouble, not as far gone as the Whooping Crane, but perhaps those resources should be put in that direction and the Whooping Crane should be written off. It's a sad state of affairs, but those are the kinds of things that these people are asking, and the reason they are asking these kinds of questions is because they are not getting information from those of you who have it. I really challenge you on that point. If you don't tell the story, who is going to tell it?

Wolf/caribou problem

A biologist in the Province of Alberta said we have got a problem with mountain caribou. We should take some of the wolves preying on those caribou. Well, the resulting hue and cry had the politicians all worried, so that's on hold. The reaction I got from my colleagues in the media was, "I don't want anybody going around the province shooting all our wolves." They thought there was going to be a wholesale massacre. The biologist who made the suggestion was left to sit there by herself. Where was the backup system?

Public information bureaus

I suppose the real problem comes from not, throughout the whole program or programs, keeping the public informed on a regular basis. You can't depend on public information bureaus, because most of these public information bureaus for the government are staffed by people who didn't make it in the media. They really are an unfortunate lot, and we in the media generally don't put much stock in them. There are a few notable exceptions, but generally they are obstructionists. They don't get information to us when we ask for it, and they run interference. Often a biologist or a wildlife manager can hide behind that facade. He says, "You have to clear it" with whomever. There it often dies, and it's really unfortunate.

Lack of enthusiasm: National Wildlife Week

One study says that 82% of the people love wildlife. They want to see it here for future generations to enjoy. I challenge how the survey was conducted. What kinds of questions were asked, who asked the questions, what kind of bias did they have, and what kinds of answers were they expected to come back with and present to their boss? Now that doesn't sound very scientific, but in our business we have to ask all these kinds of things. What you can do with statistics can be very misleading. How does that survey really translate into something practical and positive for wildlife, so the politicians can perceive they have support if they go in a given direction that might be suggested or should be suggested by you people?

National Wildlife Week last year unfortunately did not attract very much attention. Very little happened at CBC Edmonton, and I know this generally happened across the country to varying degrees. There were a few interviews that I set to celebrate the week. I normally do a series, but often the theme they pick is so bland that it attracts no attention. The open houses are staid. They are the same open houses they've had for years, attended usually by the same people. They are very pleasant, but they don't attract any interest or enthusiasm. I talked to the Director of Television, who told me that, generally speaking, wildlife programs are boring. They've seen it all before. It's all been done to death. A decade or so ago there were travelling film producers going around the auditoriums showing their wares, and they attracted crowds. This is wildlife in Alaska; this is wildlife on the riverbank; this is how we catch fish; this is how the fish live; and so on. People generally are rather bored with that, and the reality in broadcasting is a ratings game. To survive you have to be up in the ratings or the boss is going to replace you. Wildlife, unfortunately, doesn't do much to generate much enthusiasm. However, it should!

Wildlife '87 to me, as a broadcaster, was rather abysmal. I had great expectations for it. I attended a number of meetings, and I even thought that I was on the provincial executive as a media consultant. I think in a public education sense it was an abysmal failure because there was no media excitement during the entire year. When Prince Philip showed up at Last Mountain Lake, there was some coverage. I managed to get a couple of interviews. Press releases, which should have been put together as examples for well-intentioned conservation groups who might get down to the grassroots level where this whole thing has to come from to percolate up so the politicians perceive there is a groundswell of support for wildlife, didn't happen. Where were the people who had the information, who should have been speaking up?

Dealing with the media

I was at a producers' conference in Ottawa some years ago, and the then NDP National Leader, David Lewis, was in attendance. He challenged us, and I suppose the challenge can go from me to you. He said, "We, in the political parties, need you people in the media. If you are not there, if you are not reporting what I'm saying, if you don't ask me questions that are relevant, then all I'm doing is talking and preaching to the converted--the same roomful of people; it doesn't go anywhere. If you speak to the same people over and over again, there is no net gain." Well, the media doesn't cost you a nickel. I'm here, I'm available. We are constantly searching for stories.

The biggest problem we have is finding out who you are, what you do, why you do it, and what impact it has on wildlife. Every one of you has a story idea. Every one of you, I'm sure, is involved in a project that is very exciting. I know the kinds of things you do. They're exciting, and yet somehow you seem to be publicly ashamed of them, afraid somebody will find out what you do. I know one chap who studies wolves and who feels safe explaining his project at a fish and game meeting because he probably thinks that there is not going to be too much of a challenge; however, for him to go public before a large mass of people, and that's what the media gives you, would make the Jubilee Auditorium in Edmonton look like child's play. You are looking at 30 000, 100 000, or millions, depending on whether it's a local, regional, or national audience. Yet the effort is no more to talk to the local audience than it is to talk to the large one. It is the kind of information that you have and give that is of major concern to the broadcaster.

I asked Bill Wishart, who was a Senior Biologist with the Alberta Fish and Wildlife Service, "Why are you always available and tell it like you think it is?" He said, "I have enough experience, I've been around long enough, and I feel qualified to do that." I said, "Why don't some of these others?" He said, "Basically they have no communications training. It wasn't taught in school. They feel uncomfortable with it." Perhaps that's where we are, and perhaps as professional biologists it should be incumbent on you to pick up some of these skills, because often wildlife loses by default because people have no information or have very bad information.

If I ask the question, "Why don't you do more with the media?," I often hear, "Well, I tried that once. What a mess that was!" One woman explained that her husband, who was in the coal industry, decided to accommodate the reporter and told the reporter everything. He took years of understanding, years of experience, jammed it all down this reporter's throat in a half hour, and expected the reporter to report it all accurately. He simply overwhelmed the reporter.

You have to always consider that you are talking to a group of people in the broadcast business who essentially don't know a lot about wildlife. They are often city people, and you have to be careful to keep it very simple, direct, to the point, and very narrowly focussed. There is one basic rule in broadcasting if you want to communicate. It's very glib, and it's called the Kiss principle: Keep it simple, stupid! The reporter has to take the information you give him back to the station, go through it, and do a basic edit. There is always a deadline, and usually it's that same day. If you keep the information simple, you make his job simple. Don't give long, complicated answers--stay with something that is fairly simple to illustrate the point.

By setting up a proper continuity over the weeks, months, and years, you can keep this flow of information going through the industry, and you'll find that after a while the media will come to you more and more. Many of you are in a position where you can initiate your own action and a simple face-to-face conversation with a reporter. Come around to the station, personally send a letter to the reporter, or phone him. It will show that reporter that you care about him and his capabilities, and that you are interested in telling the story of wildlife. That individual then has to take that information that you've just given to him to what we call a story meeting. It will be discussed, and it will be decided whether or not it should go any further.

My basic challenge to you is to step out of your comfort zone. Tell your wildlife story so often that you get tired of telling it, and when you are absolutely tired of telling it then tell it again. You have got to keep that continuity flow. You people are the ones who are the repository of all this marvelous information. The media is looking for it. Don't be boring. Be enthusiastic about your work and about your job. The bottom line in this whole exercise, of course, is how our wildlife is doing now and how it will do in the future. If you are an obstructionist, if you are responsible for blocking the information flow, and if you've got somebody under you who's enthusiastic, knows what he is talking about, and has something to say, don't block him. Let the information go. Quite frankly, I think wildlife and its survival in the future is far more important than any one of our careers.

Session 3: "Future wildlife management direction" (1)

INTRODUCTION OF PANEL AND OPENING REMARKS

Don Robinson
Director
BC Wildlife Federation

Our first panel at this Conference was concerned with what has happened in wildlife management over time. Who's speaking about what? Who's funding what? What are some of the traditional uses? How are things being modified? It was apparent that there is a lot of change going on--everybody wants to play a bigger role, but perhaps the agencies aren't moving quite fast enough.

The second panel dealt with the relevance of current wildlife management. The discussion was on, not the need for wildlife, but how it is going to be managed. Who is going to fund it? Who is going to use it? How are things going to change? Blame for the lack of understanding about wildlife in Canada was laid on the practitioners, not the non-government organizations, for not stepping up and speaking out.

This panel is going to be concerned with future options for wildlife. It is hoped that we'll be able to take the information that we gleaned from these discussions and the experience gained from all three panels and put them to use at the review of the Guidelines for a Wildlife Policy in Canada, which we will be engaged in later.

Regarding the future of wildlife in Canada, the BC Wildlife Federation recognizes the need for more ecological reserves, more wilderness areas, wild rivers, and other special areas where wildlife will be the major factor. But we believe that there is a limit to what can be accomplished in this manner. Most wildlife species throughout Canada and indeed North America will succeed or fail based on their ability to adjust, with man's help, to mining, logging, farming, ranching, urbanization, industrialization, settlement, or whatever. We believe that all species, resident or migratory, abundant or scarce, hunted or non-hunted, competitive or non-competitive with man, will sooner or later require some form of management. It can be intensive, extensive, protectionist, commercial, recreational, integrated with other resources, or whatever is required or needed. But wildlife species cannot be left on their own to secure their own habitat needs. We must intervene!

Our first speaker, Arthur Hoole, Director of the Manitoba Wildlife Branch, will be discussing why we must manage wildlife. The second speaker will be Jim Hatter, former Director of the BC Wildlife Branch. He will be talking about how far we should go towards artificial wildlife management. We'll then have a different point of view on artificial wildlife management from Hugh Monaghan, Director of the Yukon Fish and Wildlife Branch.

A number of speakers have talked about various options that are available, and one that has been mentioned previously was a system of wildlife preservation wilderness areas. The convenors of this Conference have put together a pro and con on this rather important aspect of the future of wildlife management. It's called, "Are wildlife preservation areas really an option?" The first speaker will be Paul Griss, Executive Director of the Canadian Nature Federation, who will speak in favour of wildlife preservation areas. For a look at the other side of that coin, we'll hear from Greg Jones, Wildlife Biologist, BC Parks Branch.

Several times during this Conference, you've heard comments about the impact of tourism, which is one of the new values of wildlife. Our final speaker, Gary Runka, Land Sense Limited, will examine this topic.

Session 3: "Future wildlife management direction" (2)

WHY WE MUST MANAGE WILDLIFE

Arthur Hoole
Director
Manitoba Wildlife Branch

I've attempted to organize some thoughts in response to the question of why we must manage wildlife, beginning with a definition of wildlife management, attempting to recognize key reasons for it, and ending with observations on who we, the managers of wildlife, are.

Wildlife management defined

After scanning a few sources and consulting with a few colleagues, I found the following definition of wildlife management by Robert H. Giles Jr.: "Wildlife Management is the science and art of making decisions and taking actions to manipulate the structure, dynamics, and relations of populations, habitats, and people to achieve specific human objectives by means of the wildlife resource" (Giles 1978:1-6). The author elaborates further, noting that there are both active modes of management, such as habitat manipulation to increase elk numbers, and passive modes, such as deliberate designation of protected areas, refuges, or wilderness areas, which might promote mature forest types sustaining certain wildlife species. He concludes that "unless change results that is significantly different from that which would occur without the presence of the manager, no management has occurred" (Giles 1978:6).

Definitions are always open to question, being either too general or too narrow to cover the subject. Other definitions consulted dealt with the notion of producing wildlife crops (Trippensee 1948), or the application of ecological knowledge to balancing wildlife needs and people needs (Robinson and Bolen 1984). Clearly, the focus should be on wildlife, and with my acknowledgment that habitat requirements, population dynamics, and human interactions are all critical components, wildlife management might most simply be thought of as the deliberate consideration of wildlife and the taking of decisions or actions to influence productivity or numbers.

With these viewpoints established, I return to the question of why this activity must occur. I would like to suggest that there are at least three prevailing imperatives for managing wildlife. The first of these concerns ethics.

An ethics imperative

A historical reflection on the field of wildlife management and, more broadly, conservation reveals an ethics imperative coursing through philosophy and practice in North America. The Americans John Muir, Ralph Waldo Emerson, and Henry David Thoreau "were the first apostles of a loose collection of ideas that formed a new religion of nature" (Chase 1988:301). In the last century, they preached a reverence for nature, wilderness, and wildlife that profoundly shaped conservation efforts and led, for example, to the creation of some of the first great national parks in the United States and, indeed, in the world. To be sure, there were the utilitarians and the "multiple use school," exemplified by US National Forester Gifford Pinchot. These people also expressed an ethic of conservation, calling for wise use of resources, including wildlife. Later in this century, Aldo Leopold, in his "Sand County Almanac," forged a land ethic. He concluded that there is "no ethic dealing with man's relation to land and to the animals and plants which grow upon it. The extension of ethics to . . . human environment is . . . an evolutionary possibility and an ecological necessity" (Leopold 1949:203). He postulated that the "land ethic simply enlarges the boundaries of the community to include soils, waters, plants, and animals, or collectively: the land." It changes our role "from conqueror of the land community to plain member and citizen of it. It implies respect for his fellow members, and also respect for the community as such" (Leopold 1949:204).

Leopold, of course, had a monumental influence on the practice of wildlife management. Some of his students work among us today, and his mission has attracted many apostles. Others have come forward, many of them Canadian, to preach and practise the ethics of conservation. I consider that we are yet a long way from fulfilling Leopold's land ethic, and it is ever more needed with each passing day, Indeed, there remains a powerful ethical imperative for wildlife management.

Humans have been blessed with reason and intellect, by whatever mystery of creation and evolution they might scientifically or theologically care to profess. This power to reason, this possession of intelligence, carries with it an ethical obligation to be stewards of the biotic and abiotic elements of environment. To sustain wildlife, even as people use and enjoy it, is the right thing to do. Wildlife must be managed, because our humanity compels us to contemplate other life, develop and organize knowledge about it, and then apply that knowledge to help sustain it. Strongly related to this ethic is that of being entrusted with a heritage, a wildlife heritage for generations yet unborn. So there is this ethical imperative for wildlife management, and it is inextricably linked to at least two remaining imperatives.

An environmental imperative

Population growth, urbanization, resource extraction, development, and pollution: such impacts on the face of the earth have changed natural ecosystems. Some of these impacts are subtle; others are more obviously unmitigated disasters, such as acid rain, Chernobyl, and the rapid loss of tropical rain forests. In Canada, one of the least densely populated, vast countries on earth, major alterations have been wrought by settlement and industrialization. Wildlife Habitat Canada recently recognized the profound impacts of agriculture and urbanization on wetlands in this country. Sixty-five percent of maritime saltwater marshes, 70% of southern Ontario and St. Lawrence

Valley wetlands, 40% of prairie wetlands, and up to 70% of Pacific estuary wetlands have been committed to other uses (Wildlife Habitat Canada 1986). These wetlands are some of the most biologically productive ecosystems in the world, and those that remain continue to be lost at an alarming rate. One can go on to recapitulate the impacts of clear-cutting, soil erosion, stream pollution, and so on. The point is that environmental conditions have been widely and pervasively altered by human activity, and this presents a need for wildlife management. Failure to recognize that remnant wildlife populations live in ecosystems that are in turn disintegrated to some degree and that management is compelled to offset instabilities will almost certainly lead to further losses of wildlife.

Alston Chase (1988) recently published the book, "Playing God in Yellowstone," a work that may prove to be a milestone case study in wildlife and land management. Certainly, it is an indictment of management by the US National Park Service in the world's first national park. The consistent failing that Chase so relentlessly documents is the absence of a basic scientific stocktaking of ecosystem conditions and consequent formulation of active management policy and practice. Rather, the illusion has been perpetuated by the Park Service (in Chase's view) that Yellowstone, and indeed national parks generally, are intact ecosystems that are the last vestiges of wild America. Policies have been followed by successive administrations that essentially have required leaving vegetation and wildlife communities alone, because everything is natural and will achieve "natural" equilibrium. But, as Chase documents over and over again, everything isn't natural: the ecosystems and biota of Yellowstone have been indelibly altered over time by such factors as regional land use change, absence of fire (where before it was a factor in forest succession), failure to deal with competition for dwindling habitats among species, and so on. In short, Alston Chase makes a compelling case for wildlife management in the imperfect, incomplete natural environments that remain. He appeals for an active restoration approach, an approach that should not go unnoticed by wildlife managers.

Need for wildlife management in Manitoba

There are yet other dimensions to an environmental imperative for wildlife management. Because people habitats and wildlife habitats so often overlap and inevitably conflict, tensions must be managed between and among these contacts. Examples abound, but I'll cite two from my home base of Manitoba. The Town of Churchill in northern Manitoba is sited on migration routes of polar bears and lies adjacent to one of the largest seasonal concentrations of these animals anywhere in the world. In the fall every year, hundreds of polar bears and hundreds of people live in close proximity. The situation has called for active management to conserve bears, ensure public safety, and promote recreational, educational, and tourism benefits. That management is a must is inescapable.

Another case is the presence of a large white-tailed deer herd in the middle of the City of Winnipeg, a community of 600 000 people. Property damage, deer/vehicle collisions, and abundant viewing opportunities have resulted. An active deer relocation program has been pursued that has restocked rural areas, left some deer in the cityscape for public appreciation, and reduced public injury and property losses. Again, wildlife management has been a must.

Integration of environment and economy

One remaining perspective on an environmental imperative for wildlife management is the interconnectedness being increasingly acknowledged between environment and economic development. Related to this is a growing recognition of the need to integrate sectors of management activity that have been virtually segregated from one another--in professional schools, in agencies, and in the community. Agriculture, forestry, and wildlife management are good examples, and ambitious conservation ventures such as the North American Waterfowl Management Plan will depend for their success on a partnership of management effort in soil and water conservation, at the on-farm level, to restore wetlands, cover, and soil productivity. As Wildlife Habitat Canada reflects in a recent report on wildlife habitat status in this country, "what is necessary is a cohesive and comprehensive land use strategy which will unite scattered conservation efforts and turn land use policies, competing resource programs and conflicting goals to the advantage of habitat management and conservation of our renewable wildlife resources" (Wildlife Habitat Canada 1986:8).

The World Commission on Environment and Development (1987) and its Canadian corollary, the National Task Force on Environment and Economy (1987), have reaffirmed this theme of integration even more holistically. They have called for sustainable development founded upon maintaining essential ecological processes and genetic diversity.

Wildlife is often cited as an obvious index or barometer of environmental health or well-being. Wildlife must be managed as a part of maintaining ecological processes and genetic diversity; integration of environment and economy demands new directions in wildlife management, within strategies for conservation. Such strategies are foreseen as prerequisite to long-term benefits and societal well-being.

A benefits imperative

That human societies down through the millennia have benefited enormously from wildlife is indisputable. Cavemen were clothed, fed, and fuelled by wild beasts. Indigenous peoples of this continent built entire social orders around the pursuit, use, and worship of wildlife species. Our nation state Canada was founded upon the economy of the fur trade. Today, millions of Canadians derive subsistence, employment, income, and spiritual, recreational, and vicarious benefits from wildlife. The 1985 report on the importance of wildlife to Canadians (Filion _et al_. 1985a) states that wildlife-related activities emerged as one of the most prevalent recreation forms pursued by Canadians, accounting for estimated spending of $4.2 billion in 1981. One in five Canadians made a special trip or outing in 1981 to observe, photograph, feed, or study wildlife. Hunting attracted one in every 10 Canadians. The $4.2 billion in expenditures were estimated to produce a significant additional stimulus to the economy, expressed in terms of Gross Business Production and Gross Domestic Product (Filion et al. 1985b). These oft-quoted findings do not include the millions of dollars in receipts from such sources as foreign tourist expenditures based on wildlife or income from trapping. That there is a benefits imperative for wildlife management is not debatable. Current management practice has probably limited the realization of the full economic and social benefits available from wildlife. Nonetheless, wildlife management has contributed directly to the benefits enjoyed to date and will remain critical in the time ahead, especially in light of the foregoing discussion of the environmental imperative.

Who is "we"?

The remaining assertion inherent in the topic for this paper is that it is "we" who must manage. It may be noted that throughout this discussion of wildlife management, I have assiduously avoided stating that we must do this or we must do that! Historically and currently, wildlife management in Canada has mainly been carried out by government agencies. Pearse, in a 1986 address to the Ministers' Colloquium on Wildlife Management, describes four basic principles underpinning Canadian practice to date: ownership by the Crown, common property management, prohibition of sales of game products, and restriction of private management. He goes on to argue and conclude that experiments in contracting out wildlife management should be tried, building on, as an example, successful experiences in resource licensing in such sectors as forestry. Add to this point of view the visions of the World Commission on Environment and Development and the National Task Force on Environment and Economy, and there is a recognizable call for change in who manages wildlife and, indeed, conservation endeavours. I have already noted the need for integrated management efforts in a planned rather than reactive manner. The task force groups just cited have called for public participation, industrial and government co-operation, and education of school-aged children in environment and sustainable development. Last year's federal-provincial/territorial wildlife conference in Tuktoyaktuk made recommendations for increasing public participation in wildlife management and documented a number of projects in co-operative and joint management, especially involving native communities (Environment Canada 1987). It must be firmly acknowledged, notwithstanding these very recent tendencies to diversify the wildlife management community, that individuals like the trapper in the bush, and organizations like Ducks Unlimited, have been full and successful wildlife managers for a long time. In my view, what needs to happen is that the "we" who manage wildlife must include many more constituencies. Those who practise wildlife management must more fully represent the pluralistic nature of our society and must realize the needs and prospects for co-operative management.

Conclusion

We must manage wildlife because it is ethically responsible, an environmental necessity, and ultimately in our own self-interest. Public wildlife agencies must share the management effort with primary users and their communities, non-government conservation organizations, other resource sector managers, industry, and private landowners. The reasons for wildlife management are compelling, in my view. Without it, the prospects for sustaining wildlife and human co-existence are bleak indeed.

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WHY WE MUST MANAGE WILDLIFE: DISCUSSION

Rosemary Fox (Canadian Nature Federation, Sierra Club of Western Canada): In general, I agree with what you have said. However, I have some problems, because I'm not sure whether the picture you have given us reflects the reality, in many cases, of wildlife management. While it's reasonable and proper to compensate for the disintegration of ecosystems caused by human activities, my perception is that wildlife management, which I think we have to recognize is determined by politically determined objectives, goes beyond repairing the damage to manipulating ecological relationships in order to maximize certain species for human consumption. You say that wildlife management is essential because it's ethically responsible. I personally do not find it ethically responsible to be removing wolves in northeastern British Columbia in order to maximize the ungulate population for hunters, which basically is what that program is all about.

Arthur Hoole (Manitoba Wildlife Branch): My suggestion that there is an ethical imperative covers the whole waterfront of wildlife management, both passive and active forms, in its many shapes. You cite a particular case and practice that concerns you and extend that to question the ethical imperative. I still maintain, very firmly, that there is a prevailing ethical imperative to the practice of wildlife management.

Rosemary Fox (Canadian Nature Federation, Sierra Club of Western Canada): I feel that wildlife management is not going to get anywhere until we get control of the land base, and that's the real issue that wildlife management should be about.

Connie Harris (Federation of BC Naturalists): I appreciated your talk very much, and I especially liked your comments concerning the land ethics. I think that you should present your talk at the next meeting of the Council of BC Forest Industries, because the people who need to be convinced of integrated management are, particularly in this province, the ones who essentially have *de facto* control over 85% of our land base--the foresters and the forest industry and our friends in the Forestry Branch in some government offices around here. I think that most of us here already appreciate the value of the ethics that you are talking about.

Arthur Hoole (Manitoba Wildlife Branch): I appreciate your response to my discussion of ethics. I agree with what you have said about the history of us working in the management field sectorially and not talking enough to one another, wildlife and forestry managers. We are certainly noticing this in the Prairie situation as we move into more effective waterfowl habitat restoration and need to work very closely with agricultural managers--both farmers and the agricultural public agency managers.

Rich Goulden (Manitoba Department of Natural Resources): I just want to clarify that wildlife management, as you have defined it and discussed it here, includes non-game management and endangered species management--i.e., we're not talking exclusively about huntable species. Is that correct?

Arthur Hoole (Manitoba Wildlife Branch): Absolutely. I had hoped to allow for both passive and active modes, and I didn't make any differentiation in the discussion about the uses for which wildlife will be managed.

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"HOW FAR SHOULD WE GO TOWARD ARTIFICIAL WILDLIFE MANAGEMENT?": INTENSIVE WILDLIFE MANAGEMENT BY GOVERNMENT AGENCIES AND THE PRIVATE SECTOR

James Hatter
Former Director
BC Wildlife Branch

In this presentation I will be addressing the overall theme of the Conference, "Is the current direction of wildlife management in Canada outdated?" The question that I was asked to consider was, "How far should we go toward artificial wildlife management?"

Wildlife as an amenity resource

Forty years ago, I was naively optimistic about the ability of a provincial agency to successfully sustain and manage the hunted species of wildlife. Aldo Leopold and others were leading the way in an exciting new art and science of game management. We talked very little about wildlife management in those days. In his book, "Game Management," Leopold outlined its purpose as an attempt to describe the art of cropping land for game and to point the way toward its integration with other land use. I was soon to appreciate that, although integrated resource use on public lands is a primary objective for game managers, it becomes a matter of compromise, and we may end up far short of our objectives in competition with other interests. All too often, there is little or no concern shown by other resource managers. Our disciplines are separate and apart, and the incentives for integration are often weak as a result of overwhelming economic advantages of competing resources, such as forestry and agriculture, compared with wildlife. Part of the problem, as I see it, is that too many of us continue to think of wildlife as a cheap, but sacred, amenity resource, something apart from other uses of land. How many times have you heard people argue that we cannot measure the value of wildlife in dollars? This argument has not encouraged us to provide incentives to manage and show economic justification for integrated land use and wildlife management. The goal of wildlife management in today's society must be more than the provision of inexpensive outdoor recreation.

We must face up to economic realities in expecting financially hard-pressed governments to manage public wildlife simply as an amenity resource to our satisfaction. Sportsmen's organizations have repeatedly petitioned for increased funding with only varying degrees of success. We are naive to think that our special interest, as it is very often referred to, will provide the arguments to convince treasury boards that more investment in wildlife is good business and an important budgetary item.

I suggest that our growing reluctance to speak out in support of the hunting tradition is serious and has led us away from meaningful game management objectives and wildlife objectives and our ability to implement them. In our fervour for ecology, preservation of habitat, and non-consumptive use, we have, largely for reasons of appeasement, de-emphasized the importance of our inherited desire to hunt and the objective of sustained harvests of game from managed lands. In the 1970s, we began to downgrade game management and the hunter and to shift more emphasis to opportunities for other wildlife uses. We dropped the word "game" from our vocabulary and began to hunt "wildlife." Nowhere in the agenda can I find "game" mentioned. The belief that hunting will become a thing of the past, and I am sure you have all heard people say this, overlooks the biological basis of human nature. Why are we ashamed to be predators?--especially since we evolved this way.

Wildlife as an economic resource

To motivate more government concern for wildlife management, there must be proof of our ability not only to produce game and other wildlife, but also to provide tangible economic advantages that attract attention and investment outside of government. I think quite a few people have made that point already at this Conference. Increased expenditures of public funds must be cost-effective and able to withstand competition from other demands for fiscal allocations. As any director of a wildlife branch will tell you, or any deputy minister, when his minister has to go before Treasury Board and justify a request for more money, he has to have something pretty tangible to work with.

Our continuing failure to emphasize and demonstrate game management as the art and science of making land produce a sustained abundance of game mammals and birds and other wildlife for consumptive and non-consumptive recreational use, with accompanying enhancement for non-game species, has left us with a weakly informed and confused public, in my opinion. We can expect reluctance on the part of government and private sector to support wildlife objectives they have doubts about or do not understand.

Ducks Unlimited has pointed the way with overwhelming success. It has gained tremendous public support for waterfowl production with spectacular spin-off benefits to associated non-game species. But our investment in forest and farmland has barely begun.

It is often beyond the scope of government agencies to actually produce or manage wildlife without the understanding and support of private landowners and other associated resource interests on public lands. As early as 1932, Aldo Leopold pointed out that it is only the private landowner or the multiple-resource manager who can produce game economically. We can add other wildlife to that now.

Apparently there are those who feel that there is something artificial or inherently wrong about manipulating land intensively to produce wildlife. Misleading indeed is the belief that if land, as it exists naturally, is devoid of wildlife, we should write it off. We do not think this way about our barren lakes. We build fish hatcheries and stock our lakes and streams to improve fishing. Surely we do not want to subscribe to a wildlife philosophy that habitat enhancement or corrective rehabilitation for wildlife is artificial and undesirable. It fails to recognize what the private landowner, as opposed to government, has accomplished in much of Europe. It overlooks the achievements of semi-private institutions, such as the Game Conservancy of Great Britain--an advisory, how-to-do-it service for landowners desiring to make a profit by integrating game management with agriculture and forestry. I am sure I can change that definition of game management to wildlife management.

Game ranching in Europe and North America

In 1974, I visited a 4850-hectare hunting region in the Austrian Alps. Under so-called natural conditions--i.e., without winter feeding--this mountainous area would have supported less than 30% of the 380 head of deer living there. In Germany, Austria, and other central European countries, intensive game management is required of the landowner by law. It implies a legal land status for wildlife and recognition of game as an economic resource. It is not simply an amenity asset.

North American game farming is artificial, but then it is not intended to be game management. It is the production of ungulates for purposes not to be confused with recreational use. I believe that we ought to be thankful, however, that the non-hunting public, and not just the hunter and his close friends, will at last have an opportunity to purchase and eat venison. This will surely, at least I hope it will help to, awaken a new attitude towards the consumptive use of game animals and create a more co-operative climate for further intensive management and use of this resource on the part of those people who do not really understand why we are managing game.

Game ranching on private property will, in my opinion, be an important step forward. This is akin to European ungulate management and cannot be considered artificial unless you believe that bird feeders, nesting boxes for swallows, animal transplants, man-made marshes for waterfowl, and fish hatcheries are undesirably artificial. Game ranching is the husbandry, recreational management, production, and harvest of wild ungulates within large confined areas of suitable habitat. It differs from its European counterpart in that fencing is used as a physical means to prevent the animals from dissipating into surrounding areas, causing agricultural damage or becoming unmanageable or unable to survive due to habitat limitations. I used to think that if the habitat were ideal in a location, the animals would never move from that location. I have since found that this is not the case. Game ranching is endorsed, let us not forget, in the Guidelines for a Wildlife Policy in Canada. It is disheartening to realize that its primary opponents are the very people who stand to gain, i.e., our hunting-oriented conservation groups.

I believe that when the private sector is encouraged and allowed to practise game ranching, there will be incentives to demonstrate the full range of intensive, integrated use of land for ungulate game and other wildlife, along with forestry and agricultural interests. Those who oppose game ranching fear that it will eventually extend beyond the boundaries of private property and that our freedom of unrestricted hunting will be placed in jeopardy. This belief overlooks the fact that the economics of game ranching will limit its application on a large scale. Ninety-five percent of British Columbia is Crown land. Let us not cast aside the advantages of having the private landowner manage wildlife on part of the remaining 5% when public wildlife agencies have more than they can handle on public land. Let us take advantage of, rather than argue over, the historic fact that maximum benefits from wildlife resources have been, and are being, attained when the ownership of the habitat of desirable species and the species themselves is unchallengeable.

I "manage," in part, confined populations of about 1000 fallow deer on two islands embracing 1200 hectares, on Sidney and James islands in the Gulf of Georgia. Natural water barriers contain the animals within suitable habitat, but this is no different aesthetically from land surrounded by an inconspicuous fence weaving through the forest, which is required by game ranchers. Without some natural or artificial boundary, game animals dissipate into adjacent adverse environments, become subject to illegal hunting, winter kill, and predation, and also become a problem to adjacent landowners. Hunting big game within a confined or relatively small geographic area may seem artificial or unnatural unless you have hunted in Europe or on Sidney Island. The freedom of prey animals to escape the hunter is the main distinction I use to separate undesirably artificial management from game ranching. Let us be reminded of the study in Michigan in the late 1950s in which 26 whitetail deer were confined and hunted within a one-square-mile fenced enclosure. It took hunters 18 hours to even see a whitetail buck. I am not recommending that we hunt whitetail deer in a one-square-mile fenced area. It is not uncommon on Sidney Island to see a particular deer only once during the three-month period of intensive culling. One fallow buck, ear-tagged as a yearling, was seen only twice during the three hunting seasons that followed, and this is on 1800 acres.

In 1986, I was fortunate enough to visit an area in southern England where red deer and fallow deer are hunted on only 100 hectares of discreetly fenced property. Here, the hunters retain only the trophy, not the venison, which is processed and sold to the general public in a small, inspected butcher shop on the premises. This family industry is game ranching on a very small scale. My only concern in this case is the size of the area, but, of course, land is expensive in Britain.

The benefits extend beyond hunting and the public availability of venison. Viewing and photography are encouraged free of charge. As a naturalist, as well as a hunter, I was impressed and delighted to be shown a newly born sika fawn hiding in a natural, untrampled profusion of English bluebells and to observe, close by, a much-photographed English viper, not to mention many species of bird life in natural and semi-natural surroundings. You may say this is all so artificial or aesthetically distasteful, but as a Canadian accustomed to our vast land, it did not leave me with this impression. It is something one must experience to make an accurate assessment. The owners of this small parcel of land where they were practising intensive wildlife management showed an enthusiasm I had not encountered before for diversified wildlife opportunities.

In 1986, I paid to hunt for a trophy roe buck in Britain during the peak of the bird courtship season. The clamour of imported Canada Geese, crowing pheasants, breeding Wood Pigeons, and an unbelievable number of English songbirds added immensely to the hunting experience, for which I happily paid $150 per day. The aesthetics of Canada's wilderness and mountains are a large part of a hunter's memories of big game hunting in this country. The flora and non-game fauna are important aspects of the hunting experience. I don't know a big game hunter who isn't also a non-consumptive user. The private landowner should be encouraged to provide such diversified experiences where more people can enjoy them.

Last November, I spent two weeks in the Vosges Mountains in eastern France, hunting wild boar and deer on an area of 1200 hectares owned by the local village. The forest of mixed deciduous and conifer trees contains managed populations of wild boar, red deer, and roe deer. The private hunting lease, quite apart from integrated forestry values, brings an income to the local village of $90 000 over a nine-year lease period. Hunting in Europe is an important source of income, not only to the private landowners, but also to the local villages and towns. The result is obvious. Management includes winter feeding and harvesting of wild boar, deer, rabbits, hares, upland game birds, and other species. These are sold in local markets to satisfy public demand and thus are items of commerce. Let me hasten to say that I am not suggesting that we import the European system holus-bolus to this country, but I think there are parts of it, particularly the incentives for private property owners to manage wildlife, that we should look at very carefully.

Wildlife management by government and private landowner

I suggest to you that we have the opportunity, here in British Columbia and Canada, to enjoy the best of two worlds: that of better integrated resource management on our Crown lands, and even more intensive wildlife opportunities on our relatively small amount of private land.

There are drawbacks as well as advantages here in Canada where we have vast Crown lands of low carrying capacity and much of it with limited access. Unlike Europeans, who hunt frequently and successfully on small, highly productive acreages close to home, we are compelled to drive much longer distances in our motor homes and four-wheel-drive vehicles, sometimes only once or twice a year, and our families stay at home. European hunting is more often a recreational experience for the family. As Martin Edwards said in his presentation, the problem with our system is that it is sexist. It seems to me that European hunting is not as sexist as ours. Accompanying the hunter in pleasant surroundings and participating in drives and in nature appreciation on the part of the family add an important dimension to the hunting experience. Those are the kinds of quality experiences the private sector can provide under the leadership and encouragement of the provincial wildlife agencies. I think we have to remember that probably most of our non-consumptive users are operating relatively close to home. They are not always wilderness travellers. It's the private lands, often close to the cities, that are so important to us, and public wildlife management agencies do not have any control of that land. It is up to the private landowner. Over on Sidney Island, for example, I have found that older hunters, unable to hike as they once did, will come back and pay to hunt year after year and seemingly enjoy it just as much as they ever did when they were younger. Some will bring their wives and grandchildren, if only for the outing. We heard from the speaker from the Washington Department of Wildlife what a heavy influence crowding has had on the use of wildlife resources.

Our history of hunting only what our shrinking wilderness naturally provides has occupied our attention to such a degree that we are not really aware of the possibilities of producing hunting and other wildlife values close at hand. We may travel for days to the prairies to hunt waterfowl and upland birds when we could enjoy many more leisurely hours of good recreation close to home if income to landowners from game production were integrated into the land use incentive, as well as income from non-consumptive users. Our agricultural land has an obvious potential for development of upland bird and waterfowl hunting. Much of our private forest land offers a challenge to game ranching for deer, elk, and the European wild boar if we can put aside our prejudice against this highly sporting and productive animal. Opportunities for non-game enjoyment are many and varied.

There are many people in today's world who are prepared to pay for the experience to enjoy wildlife. We are no longer a frontier society. As we become more accustomed to paying, the more acceptable it will be. We have to demonstrate the recreational advantages of intensive management in order to generate interest and demand by consumers. Demand results from exposure to something new. It does not usually occur spontaneously.

The private landowner, guided by government wildlife advisors, must be encouraged to play a greater role in wildlife production and enhancement of habitat or we stand to lose more of our hunting heritage, including that of our shrinking wilderness. This is an important new direction for wildlife management that we can no longer afford to ignore. Science and experience can show us the way to intensively manage. Let us not hold back because improvements to nature may be considered artificial.

Sentiments against any level of game management, whether of low or high intensity, result, for the most part, from animal rights and anti-hunting motivation. Let us not back off to appease this rather strange cult. Animal rights ideology and anti-hunting run counter to the principles of conservation and nature preservation. It is incredible that after two million years or more as a predator, these people are telling us to quit the habit. They are not acting in the interest of diversified uses that are so important to protect our total wildlife heritage.

Complacency or indifference towards the management of game and other wildlife is not in the public interest. Wildlife agencies must look critically at their management objectives and determine whether these have been influenced by political expediency, compromise, or appeasement, and whether they truly embrace the practical grassroots principles so ably outlined by Aldo Leopold and other pioneer wildlife managers. I support the Guidelines for a Wildlife Policy in Canada and realize that broad principles must be translated into action outlines. But, being a pioneer biologist, I fail to appreciate why moose and caribou cannot be designated game animals to separate them from dragonflies and beetles.

The private entrepreneur must be able to call on wildlife agencies for practical advice, professional encouragement, and help. We need more research, but we must not be afraid to go ahead without it. We will need to give more attention to teaching management skills to wildlife technicians if we are to be successful in intensive management.

Any given intensity of wildlife management must be guided by common sense and economic principles. It should range all the way from low intensity on remote, lightly hunted public domain to what some may refer to as artificial management on readily accessible Crown land and private property. Here in Canada, our so-called management on public lands is often of such low intensity, it is difficult to develop objectives and demonstrate results. Guides, trappers, and Indian people may be the primary wildlife users to benefit directly from integrated land use in remote areas. Their contributions of new dollars to local economies from trapping and guiding call for more involvement in land use planning. Indian bands should be active participants. Let's see what they can do to help us! Integrated planning is the least costly means of increasing diverse forms of wildlife, and, therefore, it should be a goal of forest and other interests on Crown land. Forestry and game management are much better integrated in central Europe than they are in Canada. There, integration is the law.

Landowners and public agencies in our southerly agricultural and forest management regions are in a particularly advantageous position to seek political support and guidance for intensive wildlife management. Here, tourism and other recreational demands are high and continue to grow. This is where most of the non-consumptive use will occur.

Summary and conclusions

In summary, I believe that current wildlife management in Canada tends to be somewhat misleading or confusing. We need to make a new start in integrated resource use by promoting economic benefits rather than arguing the case for wildlife amenities at public expense. We must take a new look at our objectives for management and determine the extent to which these are designed for compromise and appeasement of those opposed to the consumptive use of game. Where feasible, game ranching on private property should be encouraged to complement the management of wildlife on Crown land. It has a potential to show, on a small scale, what we might expect from a less intensive and costly application on public lands. If science, technology, and experience can show us the way to enhance wildlife recreation opportunities and economic benefits, let us use caution in rejecting the argument that major improvements to nature are artificial.

In conclusion, I believe that we must not place importance on hunting as a low-cost income subsidy and direct livelihood only for outfitters and trappers. We must stress important recreational and economic opportunities for other people as well. If we fail to do this, the current trend towards a declining population of hunters and the loss of wildlife habitat for a diversity of wildlife will surely continue. More adversity will be in sight for all wildlife, not to mention the wildlife agencies that depend on public support and participation for their well-being and, may I add, their survival as well.

Session 3: "Future wildlife management direction" (5)

"HOW FAR SHOULD WE GO TOWARD ARTIFICIAL WILDLIFE MANAGEMENT?": REBUTTAL

Hugh Monaghan
Director
Yukon Fish and Wildlife Branch

My role is to advance a view that will differ from that of Jim Hatter, former Director of the BC Wildlife Branch. My view on the future of wildlife management in Canada does not oppose Jim's; rather, I believe our future requires the provision of a pluralistic system of wildlife management to meet a range of needs for Canadians while recognizing our trust obligations to future generations of Canadians and others for healthy ecosystems. I see Jim's concept of intensive management of certain wildlife populations as being only one contribution to that plurality. Further, I am concerned that if that model were applied in extensive areas of the Canadian landscape, it could, in fact, limit our future wildlife management options for the protection of a range of species and also for a full complement of healthy ecosystems.

I should note that these are, of course, my personal comments and don't necessarily reflect the view of my government, which is at the moment looking at a game farm/game ranch policy. My perspectives are largely influenced by my Prairie roots and by having spent my entire working career in the two northern territories with their huge, relatively pristine areas, and where the dependence of local people on, and our relative priority for, wildlife management programs are very high.

Assumptions underlying wildlife management

I understand Jim's central theme to be that wildlife management essentially consists of cropping a sustained harvest within an integrated resource management system. He suggests that this system requires intensive management of wildlife to produce sufficient economic benefits, through private ownership, to enable wildlife to compare favourably with other resource development options on private lands.

First, let us look at some of these underlying assumptions. I also assume the bottom line of sustained yield. I also assume the legitimacy of harvest and the need for intervention. However, I do not assume the inevitability of the need for harvest when a sustainable harvest is available, nor do I assume the necessity of direct or maximization of economic return from the harvest or any other form of use. Nor do I assume any beneficial linkage in North America between the private ownership of wildlife and the maintenance and conservation of wildlife resources or ecosystems in general. These seem to be implicitly a part of Jim's focus on maximization of return on private lands through this one form of wildlife management and cropping. But I may have taken some liberties with my interpretation of those implicit assumptions.

Prevalence of intensive wildlife management

I believe the intensive wildlife management programs, or game ranching, will expand, at least in the short term. We have all seen evidence of people who are keen to get into game ranching. However, I am not sure that, in fact, it will persist in Canada. There is a vacillation of reactions to game ranching by a range of jurisdictions, and it is not yet stabilized. This is a reflection of public attitudes and political will. I would also suggest that the amount of land at stake, as Jim has indicated, is very minute, which affects the degree to which this form of wildlife management will persist. However, I will note an exception in that modified forms of intensive management will indeed apply in some areas of northern Canada.

As I noted, the reactions of regulative agencies to this option are in a state of flux, and the economic return is highly variable depending on the jurisdictions that it would apply to. To answer the question of how prevalent it will be in North America, we should first look at the amount of land that is in private ownership in Canada. As Jim noted, 95% of British Columbia, virtually all of the two territories (which is a third of Canada), and I would estimate between 85 and 90% of the remainder of the country are in Crown ownership. So it strikes me that, in fact, intensive management on private lands is likely in the long term to apply at best to a minute part of Canada, although I have to admit that some of those areas will be the most productive areas of land available.

The one exception that I mentioned is in the North, in particular the Arctic. In the North, there are large areas of land that are now up for discussion in the form of land claim settlements, and significant pieces of land are being granted in perpetuity to native people there. In the North, the native people have a particular attachment to wildlife and have few options, and I would presume that much of the land that they own could well be devoted to intensive wildlife management; as well, there is probably a high priority for wildlife management in areas beyond the lands they own. So, as I noted, that is one exception for which there could be a considerable application of the regime suggested by Jim.

Maintenance of wildlife populations and habitat

The next question, then, is that, even if the attitudinal and institutional barriers could be overcome, would the intensive form of wildlife management referred to be good for wildlife management and environmental conservation generally? This, of course, begs a question of for whom and for what purpose are we managing these resources.

I will make several policy assumptions. The sense I have is that the vicarious interest of the people in maintaining relatively natural ecosystems and the increasing demand for access to wilderness areas for both consumptive and non-consumptive enjoyment will increase, and this will be for tracts of relatively undisturbed ecosystems with managed access partitioned temporally and spatially. This planning and separation are necessary to accommodate the range of interests that will be maintained. But attention will probably shift increasingly to non-consumptive forms of use. Again, these considerations suggest the need for large tracts of wilderness in the public domain, and the level of management for economic reasons will be responsive to the level of demand, which will be highly variable.

I disagree with the assertion that intensive consumptive demand only can justify maintenance of natural systems in the face of opportunity costs foregone for other forms of resource development. Although there is much in our history to support that statement, I nevertheless believe this conclusion is simplistic and, I hope, misleading. Several considerations are the basis of my optimism.

First, there is a growing concern among North Americans about the need to maintain the diversity of ecosystems, as we view with increasing alarm such radical changes as the rapid elimination of rain forests and the expansion of deserts in the Middle East and Africa. The interrelationship between these physical changes to our planet's surface resources and climatic changes is being instilled in coming generations of decision makers.

Secondly, there is considerable pressure to maintain wildlife populations in natural space in North America. The evaluation of the corresponding benefits and costs is demonstrating that in fact people are attaching higher values to wildlife, even wildlife not to be used. Also, the intangible values are receiving better assessment or evaluation than they were formerly. The changing ethic of society and changing economic techniques suggest to me that the decision makers may be in a position to make more enlightened decisions in the future.

Apart from my optimism that the present system of wildlife management will work better is my fear of that possible singular focus of Jim's model, i.e., his intensive management model. I fear it will lead to moving away from optimization of benefits, which indeed is a theoretical objective of integrated resource management systems. I fear that the inevitable outcome of that system, if it were to be practised in large tracts of private land, would be a heavy dependence on artificial systems, in some cases, perhaps, leading to too great a focus on single species that happen to be attractive and of value at that moment. This could also lead to considerable concerns with regard to contamination of both a genetic and an epizootic nature. I think we have some of those concerns now in Canada with regard to the possible crossing of red deer and elk.

I suggest that the most effective course will be to provide for a greater focus for wildlife management programs to explicitly cover a range of expanding demands and innovative potentials for development, not yet used or sought, which will broaden the value received and perceived and thereby help ensure attention to, and the maintenance of, our wildlife populations and their habitats. This should be complemented with mechanisms for enabling more effective and more broadly based public involvement in shaping wildlife management programs, policies and legislation, and, ultimately, the accountability that follows from that. This broader base of support and accountability will, to my way of thinking, more likely be successful in attaining wildlife populations and ecosystems in general. The recognition of the breadth of our common interests in wildlife will, I hope, permit a tolerance for regional latitudes in the manner in which we manage and use wildlife populations. With use comes the need for management intervention, but, in most ecosystems, the level of intervention will be to match the social demand and the economic realities. The focus of the management systems requires hierarchy of identification of the markets and priorities for access when conflicts cannot be avoided.

The range of uses will include in varying degrees all the traditional forms of harvesting and increased non-consumptive uses. I do agree with Jim that the enhanced appreciation of wildlife resources and value to be accrued is probably one of the greatest defences of that resource. More enlightened accounting systems will also be a significant defence. The more complete involvement of public and private interest groups in the management programs will provide a broader constituent base in demanding appropriate consideration of natural resource conservation issues.

Wildlife production on private lands

On the matter of wildlife production on most private lands where wildlife remains a common property resource, the key will be to provide landowners with financial incentives for making the right decisions from our perspective; presumably, such instruments as tax incentives and other options that are currently under discussion would be productive. This will presumably continue to be complemented by the focussed support of national, public, and private organizations such as Ducks Unlimited, World Wildlife Fund, Canadian Wildlife Federation, Habitat Canada, and others. However, on the local scene, this will continue to be strongly complemented by local groups that have always been the backbone of the implementation of programs in the various communities.

Wildlife resources on public lands

On public lands, we must facilitate and encourage the whole range of use of wildlife resources to meet cultural as well as economic needs. The commercial uses of wildlife in the hinterland referred to by Roy Moses highlighted the importance of these opportunities to the small communities, particularly in the North. In some cases, the value received is much higher even without increasing, or marginally increasing, the harvest. For example, in the Inuvialuit communities, a bear that was taken for $1000 for the hide accrues to $10 000 or $12 000 in the same community in the form of taking out a non-resident hunter to harvest the same animal. From a wildlife management perspective, even with that incredible increase in income, there are fewer bears taken, in many cases, because the success of the non-resident hunter is less.

The most aggressive experimentation in this approach to wildlife use is occurring in the Canadian western Arctic with the Inuvialuit. I should note that Alex Aviugana, the Chairman of the Inuvialuit Game Council, is at this Conference, and he could explain this further to those who may be interested.

Certain innovative uses of wildlife as a contribution to the social and economic fabric of northern communities are similar to those that are enjoyed on a smaller scale in localized areas in Europe. However, there are some fundamental differences in parts of Europe. As I understand it, the wildlife is, in effect, farmed and treated as private property.

That is not the case in Canada. Despite the particular attachment of native people and others in the northern part of the country to wildlife, it remains a common property resource. Despite the exclusive or preferential rights of native people to wildlife resources, this proprietary interest is left with the Crown, as is the ultimate responsibility for management, and the full range of northern society is able to contribute to those management programs. So, it is still a public resource on Crown land, despite the preferential access and the maximization of benefits to the local people.

Conclusions

In conclusion, then, I see the intensive approach to wildlife management proposed by Jim to be advanced or to be successful only in very small pieces of the country on privately held land. Hence, this approach will only be a minor part of a broadening pattern of wildlife management in Canada.

Further, I am concerned about the degree to which it could negatively affect other wildlife management programs should it expand to broader tracts of land. However, I do agree with Jim that the specific issue of game ranching is not really the issue in question. I think the issue in question is how successful we can be in broadening our full use and appreciation and recognition of values for a range of uses of wildlife. That really is the promise of the future--broadening those bases of values or recognition of them, and the involvement of publics in the development of wildlife management programs that go along with those options.

"HOW FAR SHOULD WE GO TOWARD ARTIFICIAL WILDLIFE MANAGEMENT?": DISCUSSION

Frank Beebe (Falconers Organizations): Hugh Monaghan said something about "broadening the base." As a falconer, I have been trying to broaden that base for the past 30 years. I have found access to birds for falconry purposes very reluctantly given, if at all. Any non-resident can come into Canada and, in any one of its jurisdictions, can get a licence to hunt, for example, an elk or a polar bear. In the case of the polar bear, this hunt accrues much more to the economy of the North than does the sale of the polar bear. Not one jurisdiction in Canada, at the present time, allows a falconer, even from another Canadian jurisdiction, to go in and trap or obtain a legal bird. Now that is not broadening the base of wildlife use.

As falconers, we sit on a ridgepole between so-called consumptive and non-consumptive use, because we take a creature from the wild, tame it, train it, and then do not eat it, but go out and get another five or 10 years' recreation out of it. This seems to be something very difficult for wildlife administrators to comprehend. At this Conference, I have heard nothing of this middle ground. All I have heard is that you've got to consume it or you've got to let it alone. The catching of the bird is a high-class recreation and bridges these two options.

I would now like to ask Hugh Monaghan a specific question. Why am I, as a resident of British Columbia, forbidden to go into the Yukon or the Northwest Territories, preferably, and trap under licence a Gyrfalcon and take it out and use it for recreational purposes?

Hugh Monaghan (Yukon Fish and Wildlife Branch): I wouldn't purport to speak for the Northwest Territories, but there are people here who you may want to talk to about that. From the Yukon perspective, falconry is a relatively new matter. There has been a considerable database generated and a management program built, and it was advanced and given executive approval two years ago. Our government does agree with the use of Gyrfalcons for sport and breeding purposes, and we do both of those in the Yukon. The first priority given for the allocation of birds is to residents; it is a relatively new program, and up until this point they have decided to retain it for residents only. I can't predict whether it will be expanded to non-residents or not in a couple of years, but it has been started quite conservatively.

Unidentified speaker: I have a question for Mr. Hatter. I understand that predation has a lot to do with maintaining the health of wildlife populations on these private preserves that you have visualized. Would hunters be the only predators?

James Hatter (formerly BC Wildlife Branch): Not necessarily. One of the arguments against game ranching is that predation can increase. I like to think not just about ungulates but also about other wildlife species. When I speak about opportunities on private lands for the private landowner to become involved in wildlife management--I happen to have used game ranching as one of the examples--I also refer to other species, and, of course, predation is a problem. They have had a lot of experience in Great Britain with predators, and predator control may be necessary.

Fred Bunnell (University of British Columbia): I have some pet peeves that relate to some of the points that Jim raised about commercialization of wildlife. (Val Geist made some compelling arguments against that earlier.) Foresters in British Columbia ask me why I cannot help them integrate wildlife and forestry as well as they do it in Sweden or in Germany seeing that I have spent 20 years trying to do it. I know why--they have got only two ungulate species (we have at least five times that many), and they have got rid of their predators. I can't think of a place in British Columbia where there aren't three major predators. Some of the worst wildlife management I have seen has been in Europe, and it's because they've eliminated those predators--the rooks, crows, hawks, owls, everything that kills something else. If I have an ethic that governs my management, it's the ethic of diversity.

James Hatter (formerly BC Wildlife Branch): I have been a pioneer wildlife manager in this country. I'm a hunter, a trapper, a fisherman, and a naturalist. I don't see anything wrong with some predator control in certain circumstances. The British and other Europeans don't destroy their highly prized valuable predators as far as I am aware. They may concentrate on rooks and foxes and some of the other species that are well able to look after themselves. If you're going to manage game species, you're going to have to manage predators. You manage predators by cropping them the same as you do the game species. I see nothing wrong with this. I think we have to revise our attitudes towards predator control. Should we allow a population of wolves on Vancouver Island to reduce black-tailed deer by 75% of their levels in many areas?

Val Geist (University of Calgary): I would like to ask if the arguments presented and the facts marshalled in the paper by Dr. Jim Hatter could be made available in the public domain so that they are available for all of us to examine, to trace back to the sources, and to marshall arguments for or against. It is almost impossible to deal with this opposing view mainly because it is usually situated in the grey literature of various peculiar releases that have very little scholarly integrity to them. This view can be presented in a form that surely can pass muster and go into one of our journals of wildlife management or the bulletin of the Wildlife Society.

We have a large mammal fauna on this continent that is singularly susceptible to competition and diseases. I ask those of you who are interested to look at the fate of North American large mammals wherever they were exposed fairly and squarely to the competition from European and Asian stock. Also, do not fail to look at the fate of North American animals after being introduced into Europe. The system advanced here is very close to the Texas system. It has existed since 1925 and is a mature enough system to allow us to make a judgement on how well it works and whether it is something that we should emulate or not.

Don Robinson (BC Wildlife Federation): First, I believe there will be proceedings of this Conference in which all speeches will be published. Second, I agree with you that in North America, whatever other problems we have had, we have still retained quite an abundant and, more importantly, a varied ecosystem in terms of our large mammals, especially the carnivores.

Howard Paish (BC Wildlife Federation): No one has explained some of the historic and demographic backgrounds that lead to the kind of wildlife game management in Britain that I am most familiar with. I started my hunting and naturalist experiences as a kid in Britain. The only thing that I was allowed to shoot then was the predators--I had to get rid of them or I wasn't allowed to shoot. That system has changed, I might add. No one has bothered to point out that Britain, an island about a quarter of the size of British Columbia, was forced into that kind of artificiality--starting with a huge clear-cut about the year 600 proceeding through to about 1700 or 1800, they transformed the country with a very low technology from old-growth forests into the modern mosaic that is countryside Britain. In the process, they developed a population base now reaching 57 000 000 people concentrated in a small island.

One cannot argue about the diversity of wildlife they still have there, including the predators. But that doesn't mean that our system is worse. They have to have artificial feeding in Britain because 800 years ago they built the farms on the winter ranges. They have to have winter feeding in much of central Europe if they still want wildlife because they built the farms on the winter ranges years ago.

The one area we have failed dismally on is protecting wildlife habitat. We're failing to protect habitat because we still have no control over all those other uses on that land. In Britain they gave that up a long time ago, and consequently they have no choice but to deal with artificial landscapes. What I am suggesting is that we identify where we have those artificial landscapes over here. The system described by Hugh Monaghan and Val Geist works superbly for wild animals on the wild Crown domain. The fact remains that where most of the people are, close to our larger cities, we still have wonderful opportunities, but we're not going to go about it successfully with the North American style of wildlife management. We will have to adopt the European system.

Teresa Lindner (Northwest Wildlife Preservation Society): I am addressing this to Jim Hatter. When you were talking about game ranching, and I know you have a vested interest in Sidney Island, you said that we should not be concerned about our limited hunting, or that animals will spread onto other lands. What concerns me is that you are more interested in economics than ecosystems. Do you feel that this is a benefit for ecosystems?

There are three broad goals listed in the Guidelines for a Wildlife Policy in Canada, the first of which is to safeguard the ecosystems upon which all life depends. Could you comment on that?

Jim Hatter (formerly BC Wildlife Branch): I certainly agree with your last statement. Your reference to ecosystems and the management of an ungulate within that ecosystem involves a little bit more discussion. If you are familiar with the terrain on parts of Sidney Island and on James Island, you would realize that on James Island there are four times the number of fallow deer that should be there; they are one-half the size they should be; and there are no natural plants visible that are palatable to the deer. They are living in an entirely artificial situation on broom and scotch gorse. Now I think that when managing an ungulate animal, or any animal species within its habitat, we have an obligation to think of the ecosystem. I'll admit that James Island is a very small area, part of the gulf island ecosystem. However, I believe that, quite apart from economics, managing those deer is a very essential activity for the deer themselves, for the natural vegetation, for the landowners, and for the future. On Sidney Island, the only place you can find some of the plant species that are found on other gulf islands where there are no deer is in the cages where the foresters have planted the Douglas fir trees and the deer can't get at them. So I agree with you, but I would like you to realize that managing deer on an island can be a beneficial activity.

Session 3: "Future wildlife management direction" (7)

"ARE WILDLIFE PRESERVATION AREAS REALLY AN OPTION?": YES, THEY ARE

Paul Griss
Canadian Nature Federation

Jim Walker asked me to give this presentation when I arrived at the Conference. I've used a fair amount of background material prepared by Dennis Demarchi of the BC government as a base for the presentation. I'd also like to acknowledge Rosemary Fox for reviewing it and, in particular, the person from Jim Walker's department who put it into a readable format for me.

Arguments for preservation areas

A few weeks ago, I appeared before the House of Commons Standing Committee on Environment and Forestry in the company of representatives from the Canadian Wildlife Federation, Ducks Unlimited, and Wildlife Habitat Canada. One purpose of our visit during National Forestry Week was to encourage the committee to recommend the integration of wildlife management objectives and to force management decision making. During questioning, one of the MPs commented that whenever wildlife conservation was discussed, it seemed that non-government organizations (NGOs) were always advocating the setting aside of areas for preservation as the only option. Both Ken Brynaert and I responded that that was only one option, and one that depended upon the particular values to be protected. I am not prepared to debate whether or not we should continue to have national parks, ecological reserves, or other designated areas where limited human activity takes place. The creation of such areas is one of the fundamental objectives of the Canadian Nature Federation and is a goal that I am not about to compromise for the sake of expediency or the realities of our society. Rather, I would like to discuss the urgency for the creation of additional preservation areas and the need for us all to work together to ensure that a window of opportunity is not closed forever.

Disappearing species and habitat

In defining preservation areas, I am referring to the preservation of the integrity of ecosystems with a full complement of wildlife. The size of these areas will be dependent upon the type of ecosystem to be preserved and the needs of its component wildlife. Of particular concern at the moment is the urgency to preserve areas for large carnivores. It is my contention that if we lose these species in their natural wild state, then we have lost wilderness. I am not advocating the creation of isolated islands or oases, and that, of course, was one of the major arguments against preservation areas in the past. That's been well proven to be counterproductive in the long run. This, however, does not mean that areas of preservation do not have a function within the broad scope of land use management. Such areas, whatever appellation they are given, are a necessary component of habitat protection.

In my view, the urgency for the creation of additional preservation areas has never been greater. Over 100 years ago with the creation of Banff National Park, Canadians recognized the need for preservation of what then must have seemed an inexhaustible amount of wilderness. A century later, our national park system is only half complete. Battles to preserve wilderness are hard fought and take decades to be decided while environmental destruction continues apace. Dr. David Suzuki now forecasts that, at present rates of development, Canada will have no wilderness left to preserve within 30 years. Consider that in light of the statistics that have been provided to you in the document "Demand for Wildlife to 2001." Clearly, preservation of represented ecosystems must be given a higher priority before the door is shut completely. Nowhere is the destruction of wildlife and habitat more visible than on the Prairies. Two hundred years ago, bison packed the plains; now the wild prairie is almost gone.

Few economic benefits

Despite the urgency to preserve some of this ecosystem and widespread public support, the creation of Grasslands National Park is an agonizingly slow process and continuously encounters roadblocks. Why the slow progress?--simply because wilderness preservation is rarely in the economic best interests of humans and consequently is considered as a final option. In preserving wilderness, we are embracing concepts and values that do not fit nicely with our traditional economic determination of usefulness or benefit. Preservation is a recognition of the intrinsic value of wildlife and wilderness and equates to a value of $1 on most balance sheets. Consequently, preservation is often seen as an act of charity by the agencies involved. Worse, when value systems conflict, preservation may be held up for extortion. Sometimes, of course, there are potential economic benefits to preservation through tourism and other forms of revenue. These should be used cautiously, for if it is for economic reasons that an area is set aside for preservation, then that area will always be subject to threats caused by changes in the economic parameters. No matter what some economists may believe, everything does not have a price!

Limited human intervention

Another of our value systems that can cause problems for the preservation of ecosystems is our tendency to see the world as good or bad. Something is good if you can eat it, make clothes from it, build a house from it, or even if it's just plain cute. Species that eat what you want to eat, attack you or your property, stink, are poisonous, or are just downright ugly are considered bad. We know that these perceptions are rarely supported by biological fact. Yet they are at the heart of many of our attempts to manage wildlife and wilderness. In nature, there is no good or evil--there is only life, in all of its wonderful and diverse forms. By favouring some species over others, we take actions of which the consequences in terms of ecosystem integrity may never be fully understood. Consequently, the only way to preserve life in its purest natural form is to let it evolve undisturbed in some areas. Setting aside preservation areas with limited human intervention provides us with a benchmark, a method of evaluating how well we are doing in managing our existence on other lands.

It provides a safety factor to compensate for limitations in knowledge and technique. There is far more that we don't know about nature than what we assume in our machinations, and it is arrogant to believe otherwise. In many cases, preservation areas are the only way to ensure the continued survival of a threatened ecosystem, habitat, or a species sensitive to disturbance by humans.

Preservation areas also protect genetic diversity and by preserving species may provide utilitarian benefits to humans as our knowledge of the properties of the many species increases. Of course, by preserving pure wilderness, we are retaining that spiritual ideal that motivates so many of the individuals in our field and, I am sure, is responsible for a good portion of the public interest in wildlife conservation. Those are some of the arguments for preservation, and they are well documented, so I need not expand upon them.

Arguments against preservation areas

Let's look at some of the arguments offered against preservation areas. Immediately following my presentation, you'll be hearing an argument to the contrary from a representative of the BC Parks Branch. Many of us in the NGO community suggest cynically that the anti-preservation argument forms the manifesto that the BC Cabinet uses to decide on parks issues.

Restriction on public access

One argument against preservation areas is the restriction on public access that often accompanies this form of designation. I submit that we are very careful to protect fragile items of human creation, but the same principle does not seem to be equally acceptable when applied to nature. For example, you can't climb on the pyramids, and you can't handle the Magna Carta. Why then should you have an inalienable right to wheel a four-by-four through an ecosystem that is deemed fragile, precious, and of value to all humanity? I am also disturbed by the tendency of some groups to emphasize young, healthy, white people in shorts and backpacks enjoying the view in areas set aside for preservation. That, in itself, should not be the motivation for saving these areas.

Erosion of the resource base

Our favourite argument against preservation, though, is erosion of the resource base. It provides the NGO community with a wealth of ammunition. Currently, only a very small percentage of Canada's land base is set aside as parks or protected areas. I find it totally ludicrous and a commanding argument for preservation, by the way, that things on the other 90 odd percent are so bad that the loss of a few thousand hectares of productive land will make the difference between success or failure for an industry or recreational activity. I don't care if the proponent is a logger, miner, hunter, or whatever--give the public a little credit for intelligence. Monte Hummel, Paul Griss, and other heads of NGOs aren't just table-thumping advocates of preservation, we're also managers. If we ever went to our members, boards of directors, or bankers with the argument that the lack of access to a small percentage of the resource base for our organization meant the difference between making or breaking the business, we would seriously damage our managerial credibility. We would all be guaranteed jobs in the lumber industry, however!

Preservation is unnecessary

A third argument is that human activity can be conducted with minimal impact on the environment given current knowledge, and that preservation is, therefore, unnecessary. Prove it! Soil erosion, desertification, pollution, deforestation, wholesale extinction, our common future, and numerous other examples exist of our industrial society's inability or insensitivity to mitigate its environmental impacts. Things are changing, but do we want to wager our last 20 bucks that all is now well? Not likely! One of the most glaring examples of this that I have seen lately was a letter to The Globe and Mail from the President of the Canadian Pulp and Paper Association that basically said: "OK, we've made some mistakes, we're aware of them, and we're correcting them, so there's no need for alarm." The risk is too high for us to let down our guard. We can't afford to make any more mistakes, and the benefit of the doubt must always be given to the environment.

Future of preservation areas

In preparing this presentation, I realized that I had been asked to preach to those who are essentially converted. Much mention has been made in the past two days of the prognosis for wildlife, given the impacts on wildlife of activities beyond the direct control of the people in this room. Those decision makers are the ones who need to be educated about the need for preservation areas, for, as mentioned earlier, the values required for preservation are not yet a component of their decision-making process. We need to work together to change that. This forms the crux of my presentation to you today, for I'm here to talk about the future of wildlife and the role of the preservation areas in that future. In my view, without greater emphasis and action on preservation in the next decade, much of our wildlife and wilderness will not have a future in this country, only a past.

Public support

Considering the environmental movement is only 20 years old, it is amazing how much progress has been made. Oz Parsons, who is the Executive Director of the Canadian Environmental Defence Fund, has stated that, traditionally, grassroots movements spring up, public support mushrooms, and organizations do not develop the professional and technical expertise they need to take advantage of the public support they've created. That is precisely the position we're in today in wildlife conservation. The statistics indicating a burgeoning public interest in wildlife and the environment form the basis for this Conference. There is no question what the public wants and that there is an imbalance between that and what is being provided. The only question is who is going to provide it to them.

I submit that the only options for senior officials of wildlife agencies are to lead or to follow. In many ways you've been lagging behind NGOs and letting us take the lead on a number of issues of public concern over the years. Richard Goulden gave an excellent summation of the changes that have taken place within the last few generations. Change is inevitable! As I meet senior people involved in wildlife conservation at the federal, provincial, and NGO levels, I note that with very few exceptions they all tend to be from the same age and gender classes. In genetic terms, this makes you extremely vulnerable to change. As Richard quoted, "those who . . . resist (change) . . . will be victimized. Those who embrace it . . . will profit from it." Bureaucracies are notoriously slow to adapt to changes in public opinion. However, in few other areas is public support for the programs of a government department as strong and as unified as in wildlife and the environment at the present time. The challenge to wildlife agencies is to use that support to their advantage. The public wants wilderness preservation! The support for places such as South Moresby, the Stein Valley, Temagami, and others has been unprecedented. In my view, this phenomenal public support gives us an opportunity unheralded in Canadian history.

Need for action

Yes, we must debate how the conservation dollar is divided. Yes, we must debate the different value systems that we all bring to conservation. I can't be more eloquent on that issue than Dr. Bunnell was, so I'm not even going to try. However, the important thing is that I'd much rather be wrangling over the allocation of the size of a slice of pie than a slice of tart. It's time that our wildlife agencies started to look outwards more aggressively. Stop presiding over a rear-guard action while wringing your hands over the external factors beyond your control. Wouldn't it be wonderful if a wildlife agency declared its number one priority to be the prevention of the endangerment of all species? Sure, you'd require considerable public support in order to effectively take on those agencies' activities working against you. But it's there, and it can be marshalled through the NGOs that are in existence today.

I strongly believe that the gap between public interest and public action exists because of the lack of a mechanism to translate that concern into action. Yes, we need more money, but we can't wait for funds to materialize in order to capitalize on the demand. You've got to spend money to make money. That's an old business maxim! A perfect analogy is the Canadian Nature Federation saying that as soon as our membership gets to a certain level we're going to produce a quality nature magazine, instead of saying, we're going to produce a quality nature magazine and it's going to help us to capitalize on public support.

If wildlife agencies enfranchise the non-consumptive and preservation supporters who are out there to a greater degree, through initiative and creativity in their programs and objectives, it will work to the advantage of both the agencies and wildlife, both operationally and financially. The rapid depletion of wildlife habitat and species, combined with the fantastic public interest and support for conservation and preservation today, provides us with a terrific window of opportunity. I'm not at the Canadian Nature Federation to debate semantic details over how wildlife should be preserved. I'm there to get things done! I suggest that most NGO leaders feel the same way. If your objective is the preservation of healthy wildlife and wilderness across this country, then you have to go all out for the win. I suggest that that same principle should be embraced by our wildlife managers and our wildlife agencies. If you are tired or have been through the mill before and don't think you can achieve these results, then get out of the way and let someone else take over!

The time frame is short, and it's getting shorter, but the potential to make substantial gains in the next few years, if we all redouble our efforts and co-operate, is enormous. The question is not, "Should we have areas for wildlife preservation?" The question is, "What's been holding us back?" The non-consumptive preservation oriented community, in particular, would respond enthusiastically to increased initiative and creative programming from wildlife agencies. If you embrace the challenge and opportunity, you'll be able to put the public and the NGOs to work for you, and both you and wildlife will succeed beyond your wildest expectations. If you don't, change will be forced upon you, and, during the struggle, only wildlife and wilderness will suffer. For the sake of wilderness preservation, I hope that all of our wildlife leaders have the courage and the vision to take advantage of the opportunity before them now.

Session 3: "Future wildlife management direction" (8)

"ARE WILDLIFE PRESERVATION AREAS REALLY AN OPTION?": NO, THEY ARE NOT

Greg Jones
Wildlife Biologist
BC Parks Branch

Although my topic is why wildlife preservation areas aren't an option, I'm not going to tell you that they have no value. I think if I did that I'd soon be known as a former Parks biologist. Instead, what I want to do is to show that while wildlife reserves are an important part of wildlife conservation, they are not enough to protect all of wildlife.

Preserving wildlife diversity

First of all, we should consider the wildlife diversity to be preserved. The Canadian fauna includes about 700 species of birds, mammals, amphibians, and reptiles. Many of these species include several subspecies or ecotypes that must be considered as part of the natural diversity. For example, there are about 10 subspecies of the common Canada Goose and three of the less common Peregrine Falcon. Many species also have several ecotypes defined by the strategies needed to survive in different ecological circumstances--one study identified 10 grizzly bear ecotypes in Canada. This rich diversity exists across 15 major Canadian ecozones as defined by Environment Canada, each of which contains many distinct ecological systems. For example, British Columbia includes four of the major Canadian ecozones, which incorporate 72 ecosystems defined by the Wildlife Branch. One of these zones, the Pacific Maritime Ecozone, contains 90 ecosystems, including the Queen Charlotte Lowlands, the Windward Island Mountains, and the Gulf Islands, each of which has a distinct wildlife ecology.

The general goals of the current Canadian wildlife policy are to maintain ecosystems, preserve genetic diversity, and sustain an enjoyment of wildlife. Meeting these goals requires that most, if not all, of the species in variance be maintained in all of the wildlife ecosystems in which they are found. It won't be enough to preserve just caribou. We'll have to maintain the various races, such as the threatened Peary caribou as well as the more common woodland caribou, across their ranges.

Competing land/resource uses

To be most effective in maintaining wildlife populations and habitat, preservation areas should be permanently designated reserves, such as parks and wildlife sanctuaries, free from competing resource uses and--some people think--any kind of active management. Can we preserve our wildlife diversity with such reserves? The answer is no, because we are simply unable to set aside reserves in all the important wildlife ecosystems because of competing land uses, and because reserves can't usually be made large enough to include all the desired habitats and enough animals to protect the wildlife from all outside environmental influence, and because management is sometimes needed to accomplish the purposes of reserves.

Why can't we secure all the land we want to protect wildlife? The obvious answer is that society requires considerable land and its resources for the economic activities needed to maintain a desirable standard of living. The types of needs include forestry, agriculture, hydroelectric generation, mining, transportation corridors, and human settlement. Most of the lands suitable for these uses have already been allocated and are difficult, although not impossible, to reallocate for reserves. Mineral resources are especially difficult to deal with, because they are hidden underground, and the location can't always be predicted. Consequently, lands are often unavailable, because a viable mine may be found sometime in the future. The lands suitable for renewable resource uses such as forestry or agriculture are usually the most productive and, therefore, commonly the most important for wildlife, and yet are the least available for reserves. Of course, many other lands are also prime wildlife habitats.

The greatest areas of reserve lands are set aside as parks, which are created for recreation as well as for conservation. The most common, or popular, areas for parks are scenic, and large parks are rarely created where the scenery is poor or where there are poor recreational opportunities. While most parks protect desirable wildlife features, we just can't expect that the scenic vistas that have minimal resource conflicts, or the few that we are able to obtain over the competing uses, will be enough to protect all of our wildlife diversity. After a century of setting aside parks, we currently have about 4% of Canada in various types of parks, and between 1 and 8% of the individual provinces or territories are in parks. While I won't predict how much land we will eventually set aside, and I hope it's considerable, it is obvious that the majority of our land will not be established as reserves.

In British Columbia, preliminary evaluations indicate that our protected areas provide good representation of 13%, or 72, of the wildlife ecosystems, fair representation of 24%, and poor or nil representation of 63%. It is not considered possible to secure enough land to get good representation of all of the ecosystems because of the other land uses that society requires. For example, there's little chance of creating large reserves that include all the wildlife features in productive ecosystems such as the Okanagan Basin or the Nanaimo Lowlands here on Vancouver Island. It would be especially difficult to create biologically complete reserves and ecosystems that have already been substantially altered by man, such as the prairie or mixed wood plains. Other means will be needed to protect wildlife and systems that cannot be acquired in reserves.

Biological requirements of preservation areas

To be effective in preserving wildlife over the long term, reserves will have to contain enough genetic diversity to allow species to evolve naturally with changes in their environment, meaning they need a minimal viable population. There is some controversy over how to determine this population, but most biologists agree that many, not few, animals are needed.

I'll use the grizzly bear as an example. One study at Yellowstone Park estimated that a minimum of 125 grizzlies were needed for long-term maintenance, although the author wasn't confident that this was enough. A more recent study done for BC Parks concluded that at least 390 grizzlies were required for a viable population. The largest provincial park in British Columbia, Tweedsmere, is a million hectares in area and is thought to contain only about 75 grizzlies. None of our other large provincial parks, 200 000 to 800 000 hectares in size, some of which are in good grizzly country, contains even this many. In fact, the whole provincial parks system, 370 parks and maybe 25 or 30 really big ones altogether, likely contains about 400 grizzlies, barely one minimum viable population according to our study.

To do a good job of protecting diversity, at least one viable population of each grizzly ecotype is needed. The 2.9-million-hectare system of contiguous Rocky Mountain national provincial parks contains several hundred grizzlies, which should be enough for long-term protection of the Rocky Mountain ecotype. However, not all of the other grizzly ecotypes are as well preserved. The North Coast Mountain and Pacific Coast grizzlies are especially underrepresented.

While we may create some grizzly reserves in these systems, it is inconceivable, because of requirements for other resources, that we will be able to obtain a multi-million-hectare area that includes hundreds of bears. The danger in relying on reserves that do not contain enough animals is that we will eventually wind up with fragmented and genetically isolated populations that are unable to maintain themselves. The best way to preserve grizzly populations in small reserves--and I say small from a bear population point of view--is to identify a management zone around the reserve that includes a total population within and outside the area that would be viable for the long term, and then apply a management strategy that would maintain that whole population.

The price of not looking after a large enough area can be high. For example, in Yellowstone Park, the combination of removal of nuisance grizzly bears in the Park, killing of bears that leave the park, and miscellaneous human-caused mortalities is thought to be causing a slow population decline, and some researchers are concerned that the grizzly may not survive there.

Protection of total habitat

For long-term protection, it is important to protect all of the habitat required by migratory wildlife. However, because of the limitations on land acquisition, many reserves are only part of the wildlife ecosystem. In British Columbia, several caribou populations occur in large wilderness parks. All of these populations use habitats, particularly important winter ranges, that are outside the parks. Many of these winter ranges are also valuable for other resource uses, such as logging, that could greatly reduce their capacity to support caribou. We can't expand the parks to include all of these areas, and therefore the parks themselves are not enough to maintain the population. Instead, it is essential to define the ecosystem required and then to protect the animals and their habitat, both inside and outside the parks.

In the case of the caribou, BC Parks is co-operating with the Wildlife Branch to identify and protect the winter ranges outside the parks. With increasing demands for economic growth, the demand for land and resources can only escalate, making it increasingly hard to create new reserves in the future. It will be especially difficult to create the large reserves needed to include viable populations and annual ranges of large or migratory species. If we want a diverse and abundant wildlife resource, we will need to look after it outside of, as well as inside, the protected areas.

Human influence

The next discussion will focus on the problems of looking after wildlife in reserves. Just creating a protected area does not always guarantee preservation of the wildlife. The basic problem is that it is usually impossible to protect an area from all human influences. Many protected areas are in parks. One of their purposes is to provide recreational and inspirational uses, and it is understandable that people want to visit parks. However, large numbers of visitors and the facilities required to service them can affect wildlife. Common problems are harassment by the recreationist, impacts of facilities on the habitat, and habituation leading to nuisance animals that have to be removed. For example, seabird colonies are vulnerable, and unintentional harassment has been implicated in abandonment of cormorant colonies from ecological reserves near Victoria.

Human influence can't always be avoided, even on large reserves. Consider the grizzly bear in the Rocky Mountain Parks. Although these parks contain a large grizzly population, there is concern that further development of the transportation corridors will fragment the population into smaller units, which will be smaller than desirable to ensure long-term survival.

Fire management

Maintenance of wildlife ecosystems is also difficult because of society's views about how they should be managed. Even in wilderness settings, for example, it has always been common to attack wildfires in parks, because fire has been perceived as destructive, because the public prefers scenery consisting of trees instead of burnt areas, and sometimes because tourists just don't like smoke. Yet wildfires are a major natural force shaping wildlife habitat, and many wildlife species, such as elk, fare well in the early sterile vegetation stages that fires create. Preventing all wildfires eventually results in a large area of closed forest where such wildlife species are reduced. It is not always possible to let wildfires burn because of legitimate concern for public expectations, protection of costly park facilities, or the protection of merchantable timber adjacent to the park.

If we want to maintain wildlife characteristics of the natural forest, it will sometimes be necessary to replace wildfire with prescribed fire or even mechanical tree removal. When I say that I do not mean commercial logging, I mean non-commercial removal of trees for wildlife purposes. To simulate the natural conditions as closely as possible, prescribed fire and clearing have already been used with positive benefits in several of our large parks, including Wellsgrey and Strathcona.

Population management

It is often necessary to manage protected areas to maintain wildlife. Fire management can be used to influence wildlife habitat, but it is also sometimes necessary to manage wildlife population levels, particularly where the wildlife ecosystem is no longer totally natural. The absence of predators in some parks can lead to excess populations that have to be reduced to prevent overuse of the habitat.

A good example is elk in Yellowstone Park, which periodically had to be reduced to protect their range and to minimize competition for food with other species. Excess populations of elk in Yellowstone Park have been implicated in population reductions of big horn sheep and beavers in that park because of their effects on the habitat. At present, there is discussion on the desirability of reintroducing wolves into Yellowstone Park to help create a more natural regulation of the prey populations' active management.

A closer example is Sidney's Spit Park near Victoria. The island supports about 100 fallow and black-tailed deer per square kilometre, and they have eaten almost everything in sight. In order to allow some recovery of the vegetation, as well as prevent a future die-off, we are considering a population reduction there.

Of course, it is not always necessary to manage the habitat or the wildlife. I don't want to leave that impression. In many cases, problems can be avoided by managing people and the facilities in the protected areas.

Hunting in wildlife reserves

A related topic is hunting in wildlife reserves. In BC parks, hunting is considered a valid recreation and occurs in some parks where compatible with objectives. As long as the harvest is well managed, the populations can be maintained, and recreation and related benefits can be provided. Hunting can also be used to maintain animal numbers within their habitat capacity where needed to prevent overuse. Most wildlife interest groups in British Columbia support controlled hunting in parks, and we get more public support and are able to create more parks or protect habitat than we would if we banned hunting in all cases. Hunting in park reserves may be a sensitive issue, but at least in British Columbia we will ultimately protect more populations by allowing well-regulated hunting in areas where it is appropriate.

Are protected areas effective?

To understand the effectiveness of protected areas in conserving wildlife, we'll look at the record. A recent review of 14 western North American parks, ranging from 14 000 to 2 000 000 hectares in size, found that 42 mammal populations from only three orders have been extirpated since the parks were created. Most extirpations were natural instead of being directly related to human activities in the parks. Only the largest park assemblage, our Rocky Mountain Parks, still contains an intact fauna. The study concluded that the pattern of extirpations fits the hypothesis that many parks are becoming islands because of human disturbance of habitats outside the reserves, and that active management will be needed to prevent further loss of the populations from these parks. The telling point is that there were enough extirpations to analyze statistically.

A review of parks over the world concluded that many are threatened by external or internal human activities, including major parks in Asia, Africa, South America, Europe, and North America. A similar study in the United States found that all large national parks were being impacted by human activities. The 12 biosphere reserve parks considered to be model, ecologically controlled areas were found to be subject to more threats than the average for all the parks.

Clearly, just creating protected areas that are then left alone is not in itself adequate. Management, both within and outside the reserves, is sometimes needed to protect the wildlife.

Are protected areas essential?

The last point I will address is whether protected areas are essential to maintain all wildlife species. Many species such as white-tailed deer and robins are adaptable and fare well outside reserves. What about some of the others?

There has recently been considerable interest in conservation of large carnivores, such as the wolf and the grizzly bear. In British Columbia, wolves are doing well in some areas where the habitat is being altered by resource development. For example, much of Vancouver Island is managed for logging, yet we've had a great increase in wolves in the last 15 years on the island.

Grizzly bears are also doing well thanks to good management in regions such as the Kootenays. As long as hunting or other wildlife can be controlled, their food maintained, and a diverse habitat provided, it should be possible to protect these species in most regions without reserves. It is significant that the IUCN (International Union for the Conservation of Nature and Natural Resources) manifesto on the wolf recognizes that with sound management wolves can be maintained outside of reserves and may even be harvested or controlled where justified. It is also significant that a recently published overview of requirements for preservation of the grizzly focussed on the need for interagency planning to maintain grizzlies in resource development areas, on the need for public education about grizzly conservation, and on the need to reduce mortality, rather than on the need for reserves for grizzlies.

Summary and conclusions

In summary, wildlife preservation areas are not an option to protect all of our wildlife diversity, because society has other uses for land and, as much as we'd like to, we just can't make reserves in every ecosystem. We can't always make reserves large enough to protect the wildlife over the long term, and wildlife are often affected by human activities within and outside the reserves. Consequently, active management, both inside and outside the reserves, is sometimes needed.

To conclude, the key to protecting wildlife over the whole country is to use reserves, where appropriate and where it is possible to get them, and to practise integrated management on the majority of the land that's developed for other uses. The examples of the wolf and the grizzly bear show that wildlife can co-exist provided that we have the will. I know that many people are concerned that integrated management may not work and may not protect wildlife, including the large carnivores, because of past losses and because of current pressures for maximum economic development. I can't guarantee success, no one can, and it may be difficult, but we just have to make it work or we will eventually wind up with fragmented populations of a reduced number of species in the reserves, and with even less in between.

It's in our favour that we are more aware of past mistakes and of the need to avoid continued extirpations. Society wants abundant wildlife for many reasons, including spiritual sustenance, food, hunting, recreation, viewing, or just to know it's there. These uses all require wildlife in as much of the country as possible. I believe that reserves are valuable for most species, including the large carnivores discussed, and I hope we create more; but they are not the only option for protection of wildlife.

"ARE WILDLIFE PRESERVATION AREAS REALLY AN OPTION?": DISCUSSION

Don Robinson (BC Wildlife Federation): I wasn't too sure these two speakers were rebutting each other. They appeared to have quite a few things to say in common, but I'll leave that for you to judge.

Tony Clarke (Canadian Wildlife Service): I want to take issue with Paul. I found a lot of naivety in what you said just now. You criticized wildlife managers across this country implicitly, if not explicitly. Change with the times or get out! You said that we've got the greatest opportunity in a century to do something for wildlife because of the tremendous public support, but wildlife managers are not listening, not changing, and not moving with the times. I reiterate the question asked by Tony Keith: If there's such fantastic public support out there for wildlife, why isn't there any political support? We can't speak in absolutes here, because good things are happening on the wildlife scene and in nature conservation. Wildlife will certainly benefit from South Moresby. We've got new acts that will help reduce pollution; for example, the Canadian Environmental Protection Act is going to benefit wildlife and nature. We have new institutions, such as Wildlife Habitat Canada, which really, in a sense, is a creation of the federal government.

Looking at wildlife agencies across this country, has there ever been a time when they have been in such poor shape? I am not aware of any wildlife agency in this country that has not been ravaged and nickeled and dimed to death and is now in a downward spiral despite this fantastic public support and interest in wildlife out there. So let me turn it back to the NGOs and to the public in this room--if you think this forum has happened simply because one or two NGOs are interested in bringing us together, let me tell you that wildlife managers have helped to make this happen, because we need some help. We need some political support! Instead of beating up on us, I think you'd better get together and start creating coalitions to make the politicians listen, because nothing is going to happen in this country without political support.

Paul Griss (Canadian Nature Federation): I am sorry that you interpreted my remarks to be an attack on wildlife managers; that is not what they were intended to be. What I was trying to get across was a challenge to wildlife managers in this country to take advantage of the increased public support that's in evidence today from those surveys that you yourselves are generating. I think that the fact that we're getting these new acts and these more progressive actions at the political level is an indication that there is political support arising out of this public opinion. Look at the $100 million cleanup of the St. Lawrence River that was announced recently. The political parties right now are embracing the environment as a major part of their platform because it is an item of such topical public concern. However, I don't think, despite the efforts of wildlife agencies over the years, that they should be so thin-skinned that they can't stand a little bit of criticism.

With reference to this Conference, this is the first year that the public at large has really been encouraged to attend and a forum provided for them. As Jim Walker said at the opening of this Conference, this is a very new thing for this Conference to be doing. I suggest that if you were doing this 10 years ago, the level of public support for your programs would be a lot higher right now because the public awareness and the dialogue between you and the general public would be there. Currently, wildlife agencies may not be in the state that they would have been in if the public had been brought along. The current emphasis on generating additional funds and marketing and how to take advantage of this huge tide of public opinion only came about with budget cuts and the cutbacks in all the wildlife agencies that resulted in the state they are in today. What I'm basically saying is that, in terms of marshalling public support, you've been a bit slow off the mark. The opportunity is out there right now, and the NGOs want to work with you to make things better for all of us.

Trudy Chatwin (Friends of Ecological Reserves): I direct my question to Greg Jones. If you admit that integrated resource management can't guarantee protection and enhancement of large carnivores such as grizzly bears, then why not support keeping the options open with a reserve? In British Columbia, the Ecological Reserves Unit has identified an area north of Prince Rupert of about 60 000 hectares, the Khutzeymateen Valley, with a population of over 50 grizzly bears. Just because we can't find an area with 200 or more grizzly bears in British Columbia, should we not try to set aside a reserve to protect what we have? Just because we don't have the budget or the manpower to protect some of our reserves and parks as adequately as we would like to to keep down the tourist impact, as in the case of cormorant colonies around Victoria, should we not try? Should we just give up and say we don't need reserves and carry on as usual?

Greg Jones (BC Wildlife Branch): What I said in my talk is that we should create reserves wherever we can get them for all animals, including large carnivores. I recognize that we are not going to be able to create many reserves that are big enough to get hundreds of animals over several million hectares of land. Where we do create the smaller reserves, and if the area you are talking about happens to get created as some kind of park or wilderness area, what we would have to do to protect the animals within that reserve is identify a zone around the reserve that includes the level of population you want to protect over the long term and then manage the whole thing--the reserve and the area outside the reserve--as a unit. So my answer is yes, I think we should be creating reserves in places like that.

Doug Roseborough (Roseborough Consulting): The public has been invited to these wildlife conferences since about 1978, as far as I know. So it isn't new, and we have been asking for and getting public support over the years.

Monte Hummel, in his opening remarks, talked about the sympathetic and uninformed public and said that we have an environmental movement and that people are interested in the environment. Despite the fact that they are interested in the environment, they are not providing the political clout needed to provide money. I'm suggesting that the reason for this is that conservation organizations are not concentrating on the right issues--land use, forestry practices, mining practices, agriculture, corporate resource industries, development, municipal activities. Wildlife management is not addressing those particular subjects at this Conference as much as I think that they should, because the main things that affect wildlife in Canada, in order of importance, are agriculture, municipal and urban development, and, to some extent, mining (especially in northern Canada). I'm proposing that one of the reasons that we don't get money for wildlife is that we have a very active nature reserve and provincial park and national park system, which is a cheap and easy way to satisfy the public. Therefore, you can throw thousands of cheap hectares into the system and satisfy the public. This doesn't get us to address the issues that deal with the industries--forestry, mining, agriculture, and municipal development. I am suggesting that what governments are doing by setting aside preservation areas is giving you a little bit and taking away from you a lot.

Monte Hummel suggested that wetlands in Canada were going like salami, with little pieces being sliced off at one end and all the provinces and the federal government working very hard to add to the other end. The question that I would like to ask is, How long is the salami today, and how long will it be tomorrow? Are we losing more than we are gaining?

Don Robinson (BC Wildlife Federation): I'd like to comment that our panelists were not expected to address the setting aside of areas within the larger context of resource and land use management.

Paul Griss (Canadian Nature Federation): It is often argued that when governments set aside a parcel of land, it is an excuse for ignoring a lot of other things in other areas. However, I don't know of any conservation organization that is strictly advocating preservation and ignoring all those other activities. Certainly my organization isn't! I know most of the other major ones aren't either. I think preservation areas are one component and one option, but they are not the "be all" and "end all" of conservation, and we are not naive enough to believe that.

Don Robinson (BC Wildlife Federation): As an NGO member, I think that Doug Roseborough was right. We're gaining perhaps a bit more on the setting aside of specialized areas for whatever purpose. Quite a bit of progress is being made--not enough, but some. However, I'm not the least bit convinced that we are making the grade on interresource and land use decision making in Canada.

Arthur Hoole (Manitoba Wildlife Branch): I found myself agreeing with much of what both speakers offered. Certainly preservation areas, protected areas, have played a major role to date, and we need more of them. In Canada, we probably still have the opportunity to set aside others, although many of them will have to be actively managed. There are opportunities in some that exist and in others to come. For more hands-off approaches, examples that occur to me include grizzly bear conservation or preservation in an area like the Kilhani Game Reserve.

Paul Griss asked, "Why is it taking so long for Grasslands National Park to be established?" in the context of a discussion on wilderness. I'd like to suggest at least one answer to that. I think, in part, that it has not been recognized that the ranchers that live there have been a part of it for 120 years, and that all the time people have been debating the very high values of and the needs to protect black-tail prairie dogs and Sage Grouse, there has been a co-existence of those things with a ranching economy. I think we have to embrace in some of our legislation (such as the National Parks Act, which is probably too cumbersome and not flexible enough a piece of legislation to accommodate what I'm suggesting) and in our concept of preservation areas that human economies and human presence--not just in places like Grasslands, but also in the high Arctic, where some other preservation areas are being looked at--have co-existed in places like Grasslands and are sufficient and continuing to maintain interest in the natural features there.

Don Robinson (BC Wildlife Federation): You are suggesting that the preservationists should be more flexible and include some of man's artifacts in the areas they are setting aside?

Arthur Hoole (Manitoba Wildlife Branch): I think we would have a Grasslands National Park now if we accepted that ranchers could co-exist with the grassland ecosystem.

Herman Schwenk (Unifarm--Alberta): I happen to support and believe in the concept of integrated management. I think it's absolutely necessary the way our society is developing to have that kind of thing happening. However, I believe that the NGOs that are involved need a formal kind of organization to communicate with one another, to sit down and talk to one another so that we understand where everyone's coming from; perhaps then we can get a plan of action that will make things happen. Although we come to this meeting once a year to talk about important issues, it's not necessarily the same people year after year, and we really haven't got an ongoing formal system to help focus our various points of view. In Alberta we've got the Alberta Fish and Wildlife Advisory Council, which has been dormant for about a year now. I think that kind of forum has to be ongoing. Unfortunately, that kind of forum does tend at times to make politicians uncomfortable, because things come out of it that do not necessarily have the same objectives as the politician has, and I don't know what we can do about that kind of dilemma.

Don Robinson (BC Wildlife Federation): That might be something that you should consider in your discussions tomorrow about implementation of the guidelines and policies, as well as how you wish to change them.

Unidentified speaker: I wanted to thank Paul Griss for his comments on the danger of using economic criteria only to designate or recognize the value of wilderness preservation. Every time someone asks you what a grizzly bear is worth, for example, you'd be entirely correct to turn that question back and ask the person what he is worth, because, in fact, there are some ideals and some objects in this society that can't be easily valued in economic terms. Speaking as a biochemist, I think I could tell you that the chemical materials in a human being are probably worth $5.98. Obviously, we have to recognize that there are other ways to value things in this society. If we lack the vision and the courage to grapple with those kinds of non-economic questions and criteria, then I think we probably sadly deserve to lose our wildlife and our wilderness areas. The genesis of this type of problem, where we view things, especially in a conservational sense, only in economic terms, began with the author Gifford Pinchot, who said that the world consists of people and resources. I'd like both gentlemen to comment on that statement.

Greg Jones (BC Wildlife Branch): As far as having just people and resources in the world, I have basically two views on that. Philosophically I disagree with it, and I agree with your views that wildlife should be protected and preserved as much for their own benefit as for our benefit. Realistically, most of society doesn't think like that right now; it is only interested in preserving wildlife if it can get something out of it, either a vicarious or a direct use. I think that's the reason why the government and other agencies have gone the way they have--because they have an argument that works.

Paul Griss (Canadian Nature Federation): We could probably do an entire presentation on that very issue, so it's hard to sum it up into one sentence. However, I think what that statement implies is that everything in the natural world that is non-human is there for our use and our dominance. I suspect that a lot of people would take strong philosophical issue to that, including myself. I just don't think that that statement holds water.

Bob Lincoln (BC Wildlife Branch): I have a question for Paul. You made a comment that I found very intriguing, that there's this burgeoning interest on the part of the public for wildlife, and yet there's a gap between that interest and the translation of that interest into political action. I believe the comment you made, Paul, was that the gap between public interest and public action is due to a lack of a mechanism for that translation. I'm familiar with one mechanism for that translation that apparently works very well, and it's one used by Ducks Unlimited. They've got a very effective system for translating public interest into action, and Tony Clarke brought up another mechanism, which is the formation of coalitions to put pressure on politicians to increase the funding for management and thereby translate their interest into action. I am wondering if you had any other ideas that can translate this burgeoning interest in wildlife into action on the part of management?

Paul Griss (Canadian Nature Federation): That was one of the major ideas I was trying to suggest in my presentation (and that's the thing that Tony took the wrong way). What I am suggesting to you is that public demand and interest are out there, but they are extremely unorganized and amorphous. If you ask the average guy on the street if he's interested in wildlife and the environment, he will say he is. If you ask him what he's going to do about it, he's not going to come up with a ready answer. I think that one of the best methods of harnessing that public opinion is to put it into the context of what this Conference is all about. The demand out there is for non-consumptive use; that's what we've been evaluating here. What I think we need to see is some initiative and leadership to enhance programs for those people, to get them involved at the provincial and federal government levels, not just by the NGOs but by the wildlife agencies themselves. Then those people will become more aware of the problems that face your departments on a day-to-day basis. Right now you complain to provincial and federal government levels about the lack of funding for wildlife conservation. The average guy on the street is not aware of that, and it's not just up to the Canadian Nature Federation, the World Wildlife Fund, the Canadian Wildlife Federation, and others to get that message across to the politicians. You, as the managers of wildlife, have a responsibility to get that message across to the public by getting the people involved, by making them aware, by being out there participating in programs. In my presentation, I was issuing a challenge to the wildlife departments to try to address this public interest and public demand from their own initiative, not expecting someone external to the government to do it all for them.

THE IMPACT OF TOURISM

Gary Runka
Consultant
Land Sense Limited

I am not an expert on tourism, but I am a resource manager with an interest in tourism. I submit to you that, regardless of your interests, you had better get interested in tourism and its impact on wildlife management in the future. I submit that we are far too slow in recognizing and adjusting our wildlife management to the potential impact and indeed the opportunities related to tourism in Canada.

I set the stage from the media perspective. Maclean's magazine, 23 May 1988, stated that 1.2 million Canadians consider themselves serious birders, and 3.6 million describe themselves as casual watchers, so-called backyard birders. The Vancouver Province, 12 June 1988, stated that "more than 10 000 man-years of employment are produced by non-hunters, and they spend almost $500 million a year watching, photographing, feeding, or studying wildlife." (I am not taking the position that hunters are not tourists, because they are.) In the Vancouver Province, 14 June 1988, the tourism minister announced that BC tourist industries did extremely well during the first quarter of 1988. Arrivals from domestic flights at the Vancouver Airport were up 25.4%, and overseas arrivals were up 37.3%. I think that is an indication of things to come, and it is my position that this kind of information and change will have very significant impacts on how you manage wildlife and habitat in the future. The faster we adjust our wildlife management programs to reflect the realistic demands of the tourism industry, the better.

I am going to talk about three priorities as they relate to tourism and wildlife management:

(1) understanding demand;

(2) general management approach; and

(3) site and local management considerations.

Understanding demand

I think we all agree, as resource managers and wildlife managers, that identifying and understanding the range of tourism demands, depending on specific and general uses, is most important in setting the framework for wildlife habitat and wildlife management in the future. Work such as that reported by Filion--"The Importance of Wildlife to Canadians: Demand for Wildlife to 2001"--is an important step to better understanding national demand, but it is hardly site-specific or oriented to specific wildlife management areas--that wasn't its intent. We must move quickly to these other levels to understand demand, which may well be critical in the future if we are to capitalize on the increasing economic opportunity related to wildlife-oriented tourism and yet retain the sustainable diversity of wildlife and habitat that we enjoy in this country.

It is interesting to note that tourists express disappointment and frustration when they visit parts of Western Canada that they associate, through advertising and media coverage, with abundant wildlife but do not see wildlife as readily as they assumed. Demand concerns, inserted in wildlife management plans of the future, will help to set us on the road to sustainable wildlife habitat management and enhancement programs.

General management approach

The general tourism wildlife management approach I subscribe to is basically reported in "Wildlife Viewing in BC--The Tourism Potential," published in March 1988. The report (of which I was a co-author) suggests the development approach that emphasizes the importance of maintaining quality of environment of wildlife and habitat resources while supporting development with the often closely associated tourism sector. I think that in some cases we've ignored this in the past. This means, for example, wildlife-viewing tourism must be developed in a way that generates economic benefits while protecting wildlife and its habitat and its associated environmental values. Policy on wildlife-viewing management needs to be formulated and adopted by governments across this country as quickly as possible. Development of tourism-oriented systems plans is an approach that should ensure that economic development in environmental protection objectives will be simultaneously achieved.

Site and local management considerations

It is imperative that we take into consideration the potential tourism impact at the local and site levels. That relates to habitats; to wildlife; to environmental and ecological values; and, I submit, to the previous discussion about land use and land use conflicts and the role of wildlife management in that area.

In our report "Wildlife Viewing in BC--The Tourism Potential," with specific reference to wildlife viewing (which is not the only tourism focus), we recommended more site-specific information be obtained, particularly for choice viewing sites, to assist people in minimizing negative impacts. I think we would be wise to start to think about some of those habitats and how we are going to handle this influx in certain attractive sites and over what periods of time, what seasons, and so forth. Specific factors that should be researched and related to tourist use include site sensitivity, site carrying capacity, and techniques for managing wildlife-viewing impacts. Specific habitat and wildlife management to enhance viewing or related tourist experience must be integrated with the requirements for sustaining sensitive ecosystems to acceptable standards. Management of environmental impacts in resolving land and water use conflicts with competing users will in all probability increase, not decrease, although we hope that our methods of handling them may improve as experience increases.

Another challenge relates to the local and management area integration of viewing and the so-called consumptive uses of wildlife. This is going to be a very great challenge, I think, particularly in integrating government and the private sector. This whole complex role of the public and private sector in tourism is very much the way it was related to us earlier in terms of intensive wildlife management and the more public lands-oriented focus.

Summary

In summary, I would like to again reiterate those three key priorities: understanding demand; getting on with general management approaches across this country that relate to tourism and wildlife management; and getting down to the site, to the local management level, and integrating tourism into those plans.

When we are looking at wildlife management from a tourism perspective, and perhaps even from a general resource management perspective, I wish we could get rid of the terms "consumptive use" and "non-consumptive use." Some of you may disagree, but I think they are destructive, confrontational terms. I think we would integrate our interests in a much more constructive fashion if we could get ourselves away from those two terms.

As well, government and the associated tourism/wildlife management industry will have to move very quickly to adjust to an opportunity that must be managed carefully if we are to have sustained wildlife-oriented tourism development and maintain our diversity of wildlife and habitat and respect for environmental values that so many Canadians now give top priority. All of you, regardless of your interest, must be cautious but move quickly!

Session 3: "Future wildlife management direction" (11)

THE IMPACT OF TOURISM: DISCUSSION

Sharon Chow (Sierra Club of Western Canada): I agree with you that tourism is really important and plays an important role in wildlife management. I wanted to bring up an example on Vancouver Island, where the Visitors '87 survey recently showed that whale watching was the third most popular item that people wanted to do. I feel that one of the problems that we haven't addressed here is jurisdictional problems, where whales are managed by the Department of Fisheries and Oceans, and we don't have anyone in the wildlife management crowd that is represented here to look after that issue. Also, I wanted to bring up a problem on the east coast of Vancouver Island, Robson Bight, where we have an area that is the world's only known rubbing beaches for whales, and we also have a forestry problem there, so again we have sort of interministerial jurisdictional problems. I think it is a challenge to the people here as to how we can address the management aspects of this. In terms of tourism, we have about 310 000 people in cruise ships going past Robson Bight at this point, and by the year 2000 that is expected to be up to 3 000 000 cruise ship passengers. I hope that we can, at some point at this Conference, address these problems.

Gary Runka (Land Sense Limited): Certainly I appreciate your point about jurisdictions. I think that it is a very realistic one, and, of course, it is important for this Conference because of the fact that it is a federal-provincial wildlife conference and always has been. Part of the intent, as I understand it, was to cross these jurisdictional lines and look at wildlife management in an annual conference setting. I couldn't agree with you more that there are going to be a lot of things that have to be sorted out in terms of jurisdictional roles on specific sites. The example you give is probably the best one in Canada, and that is the Robson Bight rubbing beaches and the difficulties there that exist with a lot of different jurisdictions. Certainly, as I understand it, a management plan is being prepared for that area at the present time. But I think it probably is another good example from the point of view of an area that we must, for the reasons you have already stated, bring tourism into. Just the fact that you have got that many tourists going by in a boat is enough--never mind all the other impacts that might be there. That's the kind of thing that I say we have to be extremely cautious about, but recognize that that use and that impact are going to come, if they haven't already.

INSTRUCTIONS FOR TEAMS REVIEWING GUIDELINES FOR A WILDLIFE POLICY IN CANADA--PART 1

Jim Walker
Director
BC Wildlife Branch

There are four review groups. (Lists of people included in each group are attached as Appendix A.) The focus of the exercise is to try to revise the wildlife guidelines. There are two separate sessions for workshops. The first one is a short one. The "Old-timers" (people who were involved in the preparation of the original guidelines) will acquaint participants with how the guidelines were developed, why they were developed, and what their content is. The exercise will be to get acquainted with these guidelines to find out what their strengths and weaknesses are.

There will also be some evaluation of the guidelines. Ken Brynaert (Canadian Wildlife Federation), one of the "Old-timers," has very kindly put out a questionnaire (Appendix B) that has tried to evaluate how successful these guidelines have been, reflected in the goals and objectives of all the different jurisdictions across the country. Some time will be spent on that evaluation. As I said, it is your task to judge how successful these national guidelines have been in directing the provinces in wildlife management.

The third thing we will do, if we have time, is to identify problems, anomalies, and things that you think are unworkable. We would like the Team Leaders to get some feedback from you about how successful you think the guidelines have been and what you think was wrong with them when they were originally developed. We will be prompting you with such questions as:

(1) What do you think were the main problems with the guidelines when they were written five years ago?

(2) Do you think the format of goals, guiding principles, and elements for action was the most useful?

(3) Do you disagree strongly with any of the goals, or the guidelines, or the elements for action?

(4) How would you, as a private citizen, rate the success of the guidelines?

(5) Had you even heard about them before you came to this Conference?

(6) What do you think was omitted?

We will be giving you further instructions later for the intensive workshop sessions in which you will make recommendations to the Government of Canada as to how the guidelines should be modified for the 1990s to better reflect wildlife policy.

Appendix A

WORKSHOP PARTICIPANTS

Team 1

Leader: George Finney (Canadian Wildlife Service)
Secretary: Paul Griss (Canadian Nature Federation)
Old-timer: J. Douglas Roseborough (Roseborough Resources Consulting)

Ray Addison
John C. Baird
Philippa Baker
Patty Balfour
Frank Beebe
Paul Bilous
Vernon C. Brink
Sharon Chow
Nick Coward
Tom Crowley
Dennis Demarchi
Don Eastman
Nancy Erickson
Rob Gardner
Jon Gilstrom
Geoff Godfrey
Rich Goulden
Peter Grant
Mike Halleran
Alton Harestad
Stephen Hazell
Tracey Hooper
Robert Hudson
Laurence R. Jahn
Dave Jones
Lindsay Jones
Matt Jones
Juliette Krause
Margaret Larimer
Guy Lesage
Teresa Lindner
Cactriona Matheson
Peter B. McAllister
Hugh Monaghan
L.C. Munn
Evelyn Oberg
Bruce Pendergast
Douglas K. Pollock
Don J. Robinson
Barry Saunders
Herman Schwenk
Dennis Sherratt
Kirk Smith
Pam Stacey
Andy Stewart
Doug Stewart
Kim Stubbs
Andrew R. Thompson
Maureen Wayne
John Whitting

Team 2

Leader: Art Smith (PEI Fish and Wildlife Unit)
Secretary: Steve Curtis (Canadian Wildlife Service)
Old-timer: J.A. Keith (Canadian Wildlife Service)

Arthur G. Allan
Brenda Russell Armstrong
George Arsenault
Alex Aviugana
Lynn Bailey
Tom Beck
Edward A. Begin
Don Caldwell
Robert R. Campbell
Robert A. Cannings
Frank Cardinal
H.A. Clarke
Alice Coppard
Connie Crowley
D.K. Dawson
Martin H. Edwards
Ron Erickson
R.B. Fahrig
Rod B. Fowler
Henry L. Frew
Robert Gardiner
Valerius Geist
Hamilton Greenwood
Thomas H. Hall
Andrew Harcombe
Harry E. Hodgdon
Arthur Hoole
Barry Hughson
Steven Insley
Alain Jolicoeur
Mandy Jones
Elmer Kure
Ronald Lancour
Bob Lincoln
Kevin Lloyd
Ted Miller
R. (Bob) Moody
Bill Munro
Michael O'Sullivan
Corky Peterson
M.H. Prime
S. Doug Rumsey
Vicki Ryland
George Scotter
Kenneth Seabrook
D.W. Simkin
Ian Stirling
Geoff Swannell
Robyn Usher
Jane Vinet
Lindsay Ward
Hazen Webb
Gerry Wilde

Team 3

Leader: Art Martell (Canadian Wildlife Service)
Secretary: Jim Inder (Newfoundland Parks, Recreation and Wildlife)
Old-timer: Ken Brynaert (Canadian Wildlife Federation)

R. (Bob) Andrews
Gilles Barras
Dan Blower
Ann Carmichael
Ron W. Coley
J. Blair Dawson
Claude Despatie
Chris Dodd
R.B. Fahrig
Mike Fenger
Rosemary Fox
Paul Gray
Arlin Hackman
Ray Halladay
Ian Hatter
Bertram M. Hoffmeister
Gerry Howell-Jones
Monte Hummel
Greg Jones
Gordon R. Kerr
Ted Lea
E.F. (Ned) Lynch
Wally MacGregor
Alex Matheson
Ian McTaggart-Cowan
R.G. (Rick) Morgan
Allan Murray
Frank G. Palmer
Sherry Pettigrew
M.H. Prime
Rick Searle
Tom Slater
Jim Stoner
Jean Thie
Ron Thompson
Garry Vince
Geoff Warden
Paul West

Team 4

Leader: Dave Pike (Newfoundland Wildlife Division)
Secretary: Don Simkin (Ontario Wildlife Branch)
Old-timer: Dave Neave (Wildlife Habitat Canada)

Robert Barnes
Tom Beck
Jack H. Berryman
Fred Bunnell
Trudy Chatwin
Kenneth N. Child
J. Cinq-Mars
Charlie Cornfield
Lynne Damant
Cynthia Durance
Donald L. Eldridge
Fernand Filion
Arthur Frayling
Laura Friis
Michael B. Green
Hamilton Greenwood
Paul Haley
Jeanne Halleran
James Hatter
Eldon Hawton
Del Haylock
Lois Hooge
Mary Hooper
Rodger Hunter
Peter Jones
Ian Kirkham
Louis Lemieux
Dave Low
April Maurer
Fred McFarland
Harvey Mead
Barry B. Meadows
D. Stewart Morrison
Adeline Nicol
Jacqueline Olsen
Stan Orchard
Bill Otway
Howard Paish
Bob Peart
Stewart W. Reeder
Judy Rowell
Paul Senez
Doug Stewart
Dan M. Tkachuk
Richard Trethewey
Jim Walker
Richard West
Tom Wood

Appendix B

QUESTIONNAIRE FOR EVALUATION OF GUIDELINES

Ken Brynaert
Canadian Wildlife Federation

The following is a list of "Actions to Consider," contained in the Guidelines for a Wildlife Policy in Canada. Eight jurisdictions participated in this survey.

Actions to consider	Have implemented	In progress	No action
1. Ensure that policies and laws allow for the conservation of any wild animals and their habitats.	5	3	
2. Adopt a definition of wildlife that can include any species of wild animals.	5	2	1
3. Provide a basis in law for the integrated management of wildlife with wildlife habitat.	5	2	
4. Proclaim a commitment to the sustainable use of renewable resources, including wildlife, by reflecting conservation goals in legislation.	4	3	
5. Assess and refine policies that directly influence land use and wildlife habitat.	2	5	
6. Establish permanent mechanisms for joint consultation that would permit a multi-agency approach both to defining objectives and to managing programs for the conservation and effective management of air, soil, water, and living resources.	4	4	
7. Clarify the conservation mandates and responsibilities of the many agencies whose work directly or indirectly affects conservation.	2	6	
8. Include consideration of consequences of development proposals when formulating resource policy.	4	3	1

Actions to consider	Have implemented	In progress	No action
9. Promote and assist wildlife projects involving private citizens, organizations, and business.	3	5	
10. Motivate landowners and land users to participate in wildlife management by developing co-operative programs that increase the benefits from wildlife and alleviate problems caused by wildlife.	4	4	
11. Develop effective information, education, and extension programs.	6	2	
12. Ensure adequate provision for the involvement of local communities, as well as other interests, in the wildlife aspects of resource management and land use planning.	4	3	1
13. Require assessments of the effects on the environment of the development planning process.	4	4	
14. Conduct baseline surveys and monitor the status of key species in wildlife.	5	3	
15. Co-ordinate the planning and increase the scale of research while directing research to species in which public interest is growing.	2	6	
16. Give priority to research that will provide the information needed to plan development with minimum detriment to wildlife and wildlife habitat.	1	5	2
17. Determine on a regular basis the cultural and economic values of, and the demand for, wildlife in order to better plan, allocate, and manage the use of land, water, and other resources.	2	6	
18. Assess the capability of habitats to support wildlife, including the identification of existing constraints.	4	4	
19. Assess the capacity of habitats to respond to changing land uses.	1	6	1

Actions to consider	Have implemented	In progress	No action
20. Formulate regional goals and objectives for the maintenance of wildlife habitat, particularly as inputs to land use planning.	2	5	1
21. Conduct periodic surveys of the extent and quality of habitat to determine gains and losses.	5	3	
22. Adopt measures to ensure that the use of ecosystems does not reduce their potential productive capacity so as to retain a maximum latitude for choice in making future decisions on land use and development.	3	4	1
23. Control the discharge of pollutants to minimize damage to habitat.	2	6	
24. Establish systems of protected areas that include representative ecological types, giving priority to the protection of unusual habitats of limited extent, such as estuaries and old age timber stands.	4	4	
25. Conclude agreements between government agencies and with private corporations aimed at improving and extending wildlife habitat by integrating wildlife management with:	6	1	1
(a) agriculture - plan multiple-use strategies for certain ecosystems (e.g., grazing lands, wetlands) - experiment with game ranching as an alternative to the use of land by domestic species.	1	3	4
(b) forestry - harmonize forestry and wildlife objectives for forest lands and plan cutting and reforestation programs accordingly.	1	3	4

Actions to consider	Have implemented	In progress	No action
(c) energy and mining - plan multiple-use strategies for lands altered by mining, seismic survey lines, roads, hydro-reservoirs, and other activities.	1	4	3
(d) urban and recreation development - plan to maximize wildlife benefits and to minimize both risks to human safety and damage to property caused by wildlife.		4	4
26. Co-operate to limit the deliberate or inadvertent introduction to Canada of exotic species of plants and animals.	7	1	
27. Ensure that the transplanting of plants or animals to new areas within Canada does not adversely affect local wildlife or its habitat.	3	4	1
28. Require the consent of the receiving jurisdiction to the export of wild plants or animals.	2	6	
29. Establish regional targets for abundance, diversity, and distribution.	2	5	1
30. Maintain and, as appropriate, extend suitable habitat through incorporating regional targets in regional land use planning.	2	5	1
31. Regulate the harvest of wildlife to ensure sustainable yields at levels compatible with established regional targets.	6	2	
32. Ensure adequate long-term programs, involving the public and private sectors, to reduce adverse effects of certain wildlife populations.	4	4	
33. Identify special requirements and take special measures for the conservation of rare, threatened, and endangered species and habitats.	4	3	1

Actions to consider	Have implemented	In progress	No action
34. Develop ways to use the economic benefits from wildlife to sustain the wildlife resource.	1	7	
35. Ensure that the benefits of wildlife are enjoyed by as many people as possible, consistent with the maintenance of wildlife populations.	4	4	
36. Promote responsible and ethical use of wildlife by all users and enforce and promote the acceptance of conservation laws.	6	2	
37. Promote activities that develop the recreational and economic benefits associated with wildlife.	5	3	
38. Promote activities that reflect the amenity value of wildlife.	5	3	
39. Examine new initiatives in the sale, capture, and propagation of wildlife, where the status of stocks permits.	1	3	4
40. Encourage reasonable access by the public to wildlife on private lands and permit such access on Crown lands while protecting the interests of landowners and users of Crown lands, by amending legislation relating to trespass and landowner liability as necessary.	6	2	
41. Provide access to wildlife as close as possible to centres of human population, by co-operating with municipalities, non-government organizations, and landowners.	3	4	1
42. Carry out joint programs between government and non-government organizations to inform the public of the rationale for conservation laws and regulations.	4	4	
43. Take part in international programs, mainly bilateral, aimed at assessing stocks, preserving habitat, and regulating harvest to ensure sustainable yield of those species that Canada shares with other countries.	4	3	1

Actions to consider	Have implemented	In progress	No action
44. Negotiate reasonable opportunities for Canadians to use stocks of wildlife shared with other countries.	3	3	2
45. Support the establishment and enforcement of international conventions aimed at conserving wildlife, particularly migratory species and species that exist in areas beyond national jurisdictions.	5	3	
46. Initiate and support technical assistance programs in developing countries that are aimed at the conservation of wildlife and living resources and at the integration of conservation principles in development planning and projects.	1	2	5

INSTRUCTIONS FOR TEAMS REVIEWING GUIDELINES FOR A WILDLIFE POLICY IN CANADA--PART 2

Jim Walker
Director
BC Wildlife Branch

You have already gone through one session to acquaint yourself with the Guidelines for a Wildlife Policy in Canada. What we want to do now is to get some idea about what the workshops will be about.

In this session, we would like you to give us your ideas about where the guidelines should be improved. What has been left out of the first edition of the guidelines? What have you heard at this Conference that would make you feel that the guidelines should take a different approach, perhaps even an opposite philosophy or opposite principles?

I have heard a lot of statements that made me think that we have to look closely at the guidelines. I will quote a few of the ones I've heard. "The wildlife public is simply an audience to be pleased." Is that all we are doing with these guidelines, trying to find the right set of words that is going to please the audience? Dr. Hudson said: "Wildlife agencies are largely stagnant, with little innovation or diversity." Again, I think this is a very provocative statement that you may want to discuss. From Michael O'Sullivan: "After a lack of awareness, one of the biggest problems facing wildlife is the policy of the agencies themselves that give advice to politicians." So I think there have been some very provocative things said during this Conference, and I would like you people to consider how some of those elements or components might want to be fed into the guidelines, if indeed we do want to do that.

Can we achieve any kind of consensus or priority on what the major changes should be? It's one thing just to simply list all the different ideas, but is there any consensus from this group about what the important things are that should be changed? What issues or principles or even questions of ethics were not mentioned at this Conference that possibly should be? These are the main questions that we will be asking in the workshops. Remember that your workshop leader will be asked to report back to this Conference on the ideas that arise from your workshop.

When we are going through these guideline reviews, remember that we need your ideas. We don't simply want you to give us the rote, stance, or position of the agency that you represent. If you have been interested in wildlife for as long as most of you say you have been, you must have good ideas and philosophies of your own. Don't just give us the company line; we would like to hear some of your own ideas about where we should be going.

From the first workshop session, it is evident that some people--especially the staff of the BC Wildlife Branch--felt the guidelines should be more detailed. I have to remind people that these are supposed to be national guidelines. They are not operational plans. They are not even provincial strategies. They are the general principles that we hope will guide the development of things like provincial wildlife strategies or operational plans. So if you are interested in the detail about what is going to happen in your organization, I urge you to tackle your provincial wildlife director and wildlife branch. Let's try to keep these things as general ideas of principle. Remember also that we want to eventually get the ratification of the Wildlife Ministers for these guidelines, so we have to aim at a level where we know that they will be acceptable.

Finally, I want to emphasize why we are going through this exercise. The recommendations that you make in your workshops will be collated and printed. They will be delivered to a National Task Force that is chaired by Tony Keith of the Canadian Wildlife Service and includes representatives from Ontario, Alberta, and Prince Edward Island, as well as the Canadian Nature Federation, the Canadian Wildlife Federation, and Wildlife Habitat Canada. These teams will produce a revision of the guidelines based on your input. We are making the commitment that when the next draft of these guidelines has been produced, every person registered at this Conference will receive a copy and will be asked for his comments. At the same time, we will also be going to major organizations and asking for their comments. It is further our intention to make a discussion about this draft of the guidelines a part of next year's Conference in St. John's, Newfoundland, and soon after that we will be submitting the draft to the Wildlife Ministers in Canada for their ratification. So this week is your chance to influence a meaningful wildlife policy for Canada.

REVIEW TEAM 1 REPORT

Paul Griss (Secretary)
Executive Director
Canadian Nature Federation

What we spent most of our time on was looking at missing concepts in the guidelines, or concepts where more emphasis was required. We broke those down into four major areas, and I will summarize the major points for you.

Value systems

We felt that there should be stronger recognition and guarantees of the socio-economic values of wildlife. We also felt that there should be greater recognition of and emphasis on the management of wildlife for its own sake. The group felt that a statement that wildlife had intrinsic value was required.

Management and research

Under the area of management and research, we felt the need for increased research into ecosystems to improve our predictive abilities. We recommend promoting the maintenance of wildlife and habitat diversity and the concept of no net loss. We also recommend the development and implementation of methods of measuring and monitoring our progress, and we call for greater integration of wildlife management with habitat management.

Responsibility for wildlife and application of guidelines

By far the major area of comment rested with the responsibility for wildlife and the application of the Guidelines for a Wildlife Policy in Canada. We felt that the guidelines should apply to all agencies whose activities impact on wildlife and habitat. We also felt that wildlife and habitat protection should be included and reconciled in all relevant and related legislation. Wildlife should be promoted as an indicator of environmental quality. Wildlife should also be a key component of multiple integrated land use planning. We felt that the allocation of all funding should be designed to achieve multiple benefits and to avoid inconsistencies, and that the opportunities for franchising of government responsibility should be examined more closely. We called for a greater recognition of the role and responsibilities of native peoples, and also some recognition of the responsibility for wildlife in captivity.

Public awareness

In the area of public awareness, we called for greater communication of the objectives of the policy to the public, a requirement for improved public input and influence into the decision-making process, and also improved access to information for the public.

Implementation options

We then discussed some implementation options. These included more effective distribution of the policy to all of the publics to which it was addressed; the recommendation of the enacting and strengthening of habitat protection legislation; the recommendation of audit implementation to assess our results; and the creation of national/provincial/NGO/industry advisory committees with effective terms of reference to monitor the implementation of the guidelines.

We then went through the goals and some of the preamble to the report and made some specific recommendations to the task force, which I won't elaborate on right now because most of it is purely practical in nature.

REVIEW TEAM 2 REPORT

J.A. (Tony) Keith (Old-timer)
Director
Wildlife Toxicology and Surveys Branch
Canadian Wildlife Service

Objectives

In terms of objectives of the new policy project, we felt that it must be adopted by governments as a whole, not just by Wildlife Ministers, and that means formal adoption by governments. It should be a policy document, not a guideline. There should be a performance audit every five years. The policy should be written in a much more aggressive fashion. It should identify audiences and be designed accordingly, and it should be widely distributed to various publics and other resource sectors. The draft policy should be reviewed by agriculture, forestry, and mining sectors, as well as by ourselves, between now and next year.

Format

In terms of format, we think there should be two separate formats: one roughly the length and detail of the existing guideline; another much tighter and briefer for, for example, the attention of governments.

Content

In terms of content, we have a series of ideas that should be included or emphasized more in the existing text:

- the humane use of wildlife should be included;
- adequate programming requires adequate funding;
- the user pay principle should be extended to non-consumptive users;
- management should be directed at ecosystems rather than species;
- the definition of wildlife should be expanded to include wild plants;
- the information base for wildlife management decisions should be available to the public;
- the management of wildlife should be enlarged to include key constituents, especially aboriginal peoples;
- Statistics Canada should develop national accounts to establish wildlife values and should include in those opportunity costs;

- wildlife management decisions must include socio-economic considerations;

- procuring, restoring, and maintaining wildlife habitat must be important;

- critical wildlife habitat should be designated officially by statute, and other land uses should become secondary to that, whether on private or on public lands;

- wildlife conservation should be integrated into economic decision making;

- the main obstacles to wildlife conservation should be identified;

- it must be recognized that all uses of wildlife have environmental impacts and that we should evolve beyond the consumptive/non-consumptive dichotomy;

- wildlife education should be strengthened, directed particularly towards urban adults and children, and it should include the notion of a land ethic;

- an ethics code for wildlife management should be developed;

- government support programs in a natural resource sector--e.g., in farming or forestry--should not be given in cases where good land use practices are not being followed;

- the status of wildlife should be linked to the status of the environment;

- there should be an emphasis on public ownership and a de-emphasis on commercialization, especially game farming;

- the changing clients of wildlife management programs should be monitored constantly;

- we should inform the public that wildlife health is dependent on the decisions of other resource sectors outside wildlife;

- we should clarify the concept of protecting genetic diversity, which we felt was not well described in the existing paper;

- we should strengthen and clarify the importance of habitat to wildlife;

- there should be a regular report on the status of wildlife by governments; and

- the programs for non-consumptive users should be enlarged.

REVIEW TEAM 3 REPORT

Jim Inder (Secretary)
Assistant Deputy Minister
Newfoundland Department of Culture, Recreation and Youth

General recommendations

First, we discussed the need for, in general, more input by the public and at an early stage in terms of developing the guidelines and some of the implementation options that came out of it. Second, we felt the theme throughout the guidelines was not quite aggressive enough. We thought that, if you accept the word "proactive," the whole thing should generally be a little more proactive and not just maintaining what we have now, whether it's ecosystems or numbers of animals or whatever.

Specific problems

In terms of some of the problems that we identified specifically in the first workshop session, we talked about how we can improve the use and application of the guidelines by the various jurisdictions of Canada. We felt that there is a need to have some reference to the involvement of aboriginal peoples. We wondered if there should not be more specific and measurable goals. We also thought that in some sections of the document we discuss or refer to wildlife for its own sake, whereas in others we talk specifically about the use of wildlife --there seemed to be a problem in that the document jumps back and forth between wildlife and use.

We felt that the protection of habitat by groups other than wildlife agencies, particularly Parks, is not highlighted enough. We felt that we really should consider the genetic diversity within the individual wildlife species.

The definition of conservation in the preamble relates a lot to human behaviour and not to wildlife behaviour. We felt there is a need for a basis, in law, for some of these principles and goals that we have outlined. There is also a need for a higher profile for education of the public on some of these principles and goals. Last, but certainly not least, we ran into a real problem with members from different parts of the country not understanding the different buzzwords, so we felt there is a need for a glossary of the specific buzzwords and any other terms that are not clear in the next edition, so that everyone, from Victoria to St. John's, is talking along the same lines.

* * *

Art Martell (Leader)
Regional Director
Pacific and Yukon Region
Canadian Wildlife Service

We went through the main elements of the problem first because we did not find logical places to put all of them in, so we can give that as guidance to the people who are redrafting.

Definitions

In general, there need to be clearer definitions, particularly of key terms, such as "preservation." We felt that there was inconsistency in the way things were "priorized" as maintenance and use all the way through, and that's why we highlighted the sustaining of the systems right at the beginning. We found the definition of wildlife itself to be a major problem and felt that it has to be clarified. We looked at relating it to such organisms as fish, plants, and invertebrates.

General goals

We spent the most time talking about the general concept. We felt that the principle of sustaining wildlife ecosystems in and of themselves is not clearly enough spelled out, and that the priority for sustaining the wildlife systems or wildlife ecosystems should be the paramount goal. We are not saying that the goal of use and wise use and sustainable use should not be there, but that this other goal was not clear enough in the concept.

One of the high priorities that we looked at in terms of goals was consideration of genetic diversity within species. The maintenance of ecosystems should contain, more directly, the concept of restoration, creation, or enhancement of systems. It is not enough to maintain them. People have different views on that. Within the guiding principles, there must be a proactive public involvement. We need ways of preserving or safeguarding the natural systems; that is not clear in the guiding principles. The cost of damage to wildlife and its habitat, we feel, should be borne by responsible parties. That also is not present in the guidelines. We should also have a clear recognition that wildlife can have negative impacts, and that requires management.

Developing conservation strategies

We looked through the broader elements in terms of adopting conservation strategies. The strategies we felt must be within the context of an ecosystem or an ecosystem strategy--integrated resource management, if you will. There is a need for a proactive involvement of wildlife managers in the development of those strategies--they should not be developed by one sector, then reviewed for implementation. That is consultation, but it's not very effective.

Public involvement

We should certainly highlight public involvement. The guidelines point out the private sector and mention the public as part of the private sector, but they don't really highlight the need to get the various interested publics involved very early. There was a strong feeling that government reviews, reports, and wildlife managers must be more accessible to these publics if they are truly going to be effectively involved. We must improve the basis of wildlife management by improving our knowledge of the ecosystem function. The guidelines highlight research, but not a commitment to find mechanisms to include universities, NGOs, and other mechanisms to improve that research base.

Maintaining wildlife habitat

The guidelines look at ensuring maintenance of wildlife habitat, but have not included the concept, we felt, of restoration, nor have they included the commitment for tools such as the Fish Habitat Policy, which will allow agencies to reach that goal of maintaining wildlife habitat. We should consider a broader strategy of protecting areas, specific areas, so that we can preserve the genetic diversity over a broad basis. The guidelines emphasize setting ecosystems aside, but we could do it postage stamp fashion and still lose the overall genetic diversity of an area unless we look at a system strategy.

Game ranching/genetic diversity/targets

We felt that game ranching comments were much too specific in the context of the rest of the elements that were presented. The genetic diversity structure of Canadian ecosystems is an element, but the guidelines don't look at genetic engineering or biotechnology, and these must be addressed. We did not get into detail on how that might be done, but we felt it is something that should be in the new strategy. We talked about optimum wildlife populations and setting targets. Those targets can be very misleading, so unless targets for all of the components of the system are looked at in an ecosystem context, you could get one that's very much out of balance.

Benefits of wildlife

We should not be increasing the benefits of wildlife. We felt that a better wording is promoting the benefits and responsible and ethical use of wildlife. That needs to be done with an action statement dealing with education programs.

International obligations

Finally, there were a lot of statements on the international side in the guidelines. We felt there was not a commitment to fulfill the international obligations that we undertake in coming up with these various agreements.

REVIEW TEAM 4 REPORT

Dave Pike (Leader)
Director
Newfoundland Wildlife Division

We have organized our comments under three general headings:

(1) making comments on the current guidelines;

(2) some suggestions for updating; and

(3) a few observations that are not directly related to the guidelines but should, we think, be considered.

Comments on current guidelines

There was a general consensus that the guidelines, as written, are still basically relevant today. As others have said, there must be an effort made to make the guidelines more proactive. There is also, in our opinion, a need to package the guidelines more attractively to stimulate use, by politicians in particular, and to make them more marketable. We also suggest that it would be desirable to indicate levels of concern or, perhaps I should say, of priorities for the implementation of the guidelines. To continue to be acceptable, the guidelines must remain rather broad or national in scope rather than area-specific. While expressing general satisfaction with the implementation of the various components under the control of wildlife agencies, considerable concern was expressed regarding our difficulty or failure to implement those components of the guidelines that affect, or are strongly influenced by, other major resource users or managers. It was noted, in particular, that the current guidelines are not as demanding with respect to forestry-oriented integration as they are with respect to other users.

Updating of guidelines

Our suggestions for consideration by the task force considering the updating or revision of the guidelines are as follows:

- there should be a broader definition of the term "wildlife";
- there should be a commitment by wildlife agencies to monitor routinely the socio-economic factors generated by the wildlife resource, and a commitment to make the public and, in particular, the decision makers--the senior bureaucrats and politicians--aware of the results of such socio-economic surveys;
- use should be made of the information from these surveys to adjust programs to reflect changing demographics; and

- there should be an increase in emphasis on delivering education programs and on the enforcing of legislation related to wildlife management.

We recommend devising ways of increasing the emphasis on consultative mechanisms and achieving constructive non-governmental involvement in wildlife programs, not only by organized non-government agencies but also by individual members of the public. We emphasize the need for co-management with native peoples, especially in light of the constitutional developments that recognize native rights. Again, the guidelines should be presented in a more proactive manner.

Let us consider the discussion about the use of the terms "consumptive use" and "non-consumptive use." We strongly recommend that future guidelines avoid any use of these terms to minimize polarization, which is counterproductive. One member of our group observed that perhaps the term "beneficiary" should be used rather than "user of wildlife." The revised guidelines should emphasize the desirability of good interjurisdictional relations, not only interprovincial and international, but also interagency--governmental and non-governmental. We further suggest that there is a need in the preamble to express the unique value of wildlife and wildlife habitat to Canadians, and to Canada as a nation, and emphasize the global uniqueness of Canadian wildlife and wildlife habitat.

The concept of protection as a tool for management should be explained and promoted at the same time as we are explaining the need for protected areas. A list of values or benefits of wildlife should be included and perhaps expanded, including such items as the therapeutic value of wildlife, the aesthetics, and the cultural values.

Other comments

Our general comments that perhaps are not directly related to the guidelines *per se* include the importance of providing systems to increase the degree of implementation and to provide for the measuring of accountability for the implementation of the guidelines. I think this has been suggested in other workshops. It was also suggested that wildlife managers make more use of the non-technical information that can be provided by experienced users. This was brought up in particular in connection with making use of information from native peoples. We usually refer to this information as anecdotal, but it was suggested that a more concerted effort be made to get this type of data from the experienced users, regardless of ethnic origin, and make use of the data when we are developing plans. Featured species or specific species may be identified in the development of habitat guidelines, for example, and that is generally an acceptable way to proceed provided that the right featured species is chosen. In other words, when providing guidelines on a forest management plan, for example, it would be adequate to provide moose habitat guidelines, which would automatically have spin-off benefits for other species, such as the snowshoe hare.

The problem of allocation is a significant concern between user groups, but the real concern or problem is the maintenance of the resource. We felt that, generally speaking, the allocation problems, if there are any, can be greatly reduced by user groups working together on the real problems encountered by wildlife.

Banquet speech (1)

"HOW DO WE CAPITALIZE ON AND UTILIZE THE PUBLIC INTEREST?"

Ian McKinnon
President
Decima Research Limited

I would like to talk about a subject that was raised earlier in one of the sessions: If everyone is in favour of the environment, why don't we have the political support and clout that we know we need in all of the organizations working for Canadian wildlife? I am going to try to develop an answer to that question by going through Canadian attitudes about the environment and telling you how Canadians look at issues related both to wildlife and within a larger environmental context. I don't want to do that just so that I can leave you with some sort of academic treatise about Canadian views on wildlife and the environment. It's my real belief that studying public attitudes and public opinion matters only if you, in turn, go out and use the information gained from it. I hope that you, by looking at the way Canadians view wildlife and the environment, can go away with a better understanding of how you can speak effectively to the broader public and mobilize them so that you'll get exactly the kind of public support and political pressure that you know Canadians are capable of giving you because of their commitment to the environment.

Changing values

My presentation is based on the Decima Quarterly Report, which is an audit over time of Canadian attitudes about a wide array of issues. I am going to start with a very simple model, which says that all Canadian behaviour--whether it's buying something as simple as beer or as complicated as a nuclear reactor; voting on issues; writing to members of parliament; speaking out on issues; trying to change the views of friends and associates--is the product of the opinions and attitudes Canadians form, all the time, from external media. We only absorb external information in a way that is consistent with our underlying values, our bedrock beliefs, the way in which we structure our views of the external universe. When it comes to issues like the environment, or issues like wildlife, we are talking about fundamental Canadian values.

We have seen, in the last 25 to 30 years, a fundamental change in Canadians' and indeed North Americans' values about wildlife and the environment. In fact, since World War II, I can think of only four or five societal issues on which Canadians have fundamentally changed their views. There has been a clear change in the values we ascribe to the role of organized religion, clear changes in our views concerning race relations, and clear changes that are under way today in our views on women's role in the workplace. But one issue on which Canadians' views have unquestionably changed is the environment. You can think back 25 or 30 years ago to the responses to things like

Rachel Carson's book, "Silent Spring." The response then was that this probably was an important book, but it was a very strange and new way of looking at things, for a mass public. Today it has become mainstream thought. It is fundamental to the way in which we view our world.

To show you just the degree to which Canadians do value environmental issues, here's a response to a very simple question we asked people to agree or disagree with: "A clean environment is one of the things making Canada one of the best countries in the world in which to live." Eighty-three percent of Canadians readily agreed with that. Part of the way in which we define ourselves is by our vision of the external environment and the pride we can take in the wildlife and the nature that surrounds us as Canadians.

This is something that distinguishes Canadians from Americans. In exactly the same time period, only 52% of Americans agreed with the statement: "A clean environment is one of the things making the United States one of the best countries in the world in which to live." We often have a view of Americans as being very concerned about the environment, with a lot of activism coming out of the United States. But the reality is that we, in Canada, place significantly more value on the environment than people in other countries.

If you really want a sure measure of the kind of typical Canadian pulse, look at our popular culture. The example I use is beer commercials--over and over again, you see Canadians responding to images that are in the bush, outdoors. When Labatt decided to relaunch one of their brands, what started off one of their major commercials?--it was somebody high rigging a Douglas fir. It hasn't been done in 30 or 40 years, but it is our image of ourselves! We have an environment out there that is not necessarily pristine, but is important to us, and it distinguishes us from other people.

Changing society

Aging society

I want to take you through actual realities in this country, the physical changes that are under way, that affect the way we view the external world, and then take you through some of what this means in a very practical sense. I want to show you three changes that aren't attitudinal at all, that are, in fact, real changes that will affect the way we deal with the external world. Here is a very simple one--it's something called an age pyramid, so named because typically a society has more younger people than older people. Starting in the early 1960s, we started having fewer and fewer children, and that's going to affect, in a fundamental way, our draw on our environment, because we are going to become a changing and a more elderly society. That will affect the way we view our external world, and in fact the way we use the environment. It's already affected things like schools and, increasingly, the workplace.

Urban society

There is also another reality that I think is very important to understand about Canada. We have a vision of ourselves as outdoors people, people who use the wilderness. But in reality we are one of the most urbanized societies in the world. In 1981, 76% of Canadians lived in areas with populations over 25 000. We are not a rural society. In fact, we are significantly more urbanized than the United States. Only a small proportion of our population, therefore, is a population that has immediate access to the outdoors.

If you talk about the political consequences of this and the public opinion demand that is generated, it's very straightforward. We have an urban society that cares a lot about the environment and whose policy preferences are driving the political structure out there, but it's an urban people's perception of the outdoors. People like you can't depend, in fact, on people's immediate access to the outdoors to provide them with the background or knowledge that, in fact, many of you have. That, in turn, means that there is a very specific task, or challenge, that you have to overcome, and that's the very simple role of education, because you're not dealing with a society that is necessarily at home, or has first-hand experience, outdoors.

Polyglot society

Finally, there is another dramatic change in Canadian society. If we examine levels and sources of immigration--European, North and Central American, Asian, and African--over the last 30 years, we can see that we have a big skew in the source of our population. We continue to have about 16% of our population foreign born, but our sources of population come from different areas, areas where many of the traditions that grew up in North America in the later part of the last century and in northern Europe about conservation, about the way in which society used natural resources and wildlife, are dramatically different.

To pull this together before we go on to some more attitudinal data, I think there are three very important, fundamental points. First, we are an urban society. Secondly, we are increasingly a polyglot society. People have come from all over the world bringing with them different cultural values and different views of the world. That means that you can't rely on a traditional consensus based on northern European cultural values combined with a population that had ready access to the wilderness and outdoors. Finally, we are an aging society, so the way we use the wilderness will change dramatically.

Canadian views on the environment

Quality of the environment

With that background, what happens when we raise the issue of the environment for Canadians? We did a study a year ago, in the Decima Quarterly Report, in which we asked: "When I say the word 'environment,' what comes to mind?" Instead of doing the normal coding, where we categorize responses according to concern about acid rain or whatever, we asked our people to consider: "Are the responses things that people take pride in, or positive aspects? Do people say: 'The environment is beautiful, and I'm proud of it,' or are they concerned about problems?" By a margin of about 8 to 1, Canadians responded that "environment" meant a problem or a concern. That's very important, because it means not only that it is an important issue, but it's one about which they have tangible and very real concerns.

We asked them explicitly later in the survey whether they were concerned about the quality of the Canadian environment. We found that 86% said they were very, or somewhat, concerned about the quality of the environment in this country. These two responses could lead you to believe, in fact, that we don't value our environment significantly. However, when we asked Canadians what the quality of the Canadian environment is, 62% of Canadians said it's excellent or good. Americans are very similar, although you saw earlier that they don't have it as a deep, cultural value in quite the way that we do. So, people are concerned about the environment, but not because they see it in real trouble, not even because they see it declining.

We've asked on two occasions whether Canadians think the quality of the environment today is better or worse than it was some years ago. We found that most people said it was about the same, but 27% said that it's actually better, and only 20% thought it had declined in Canada. There are some very interesting regional differences. One of the biggest changes occurred in the last five or six years in the Province of Quebec, where people are much more likely to see improvements in the quality of the environment, or note them, than elsewhere in the country. But we still don't have a situation where Canadians say that we have current, serious problems in the environment, that it's in bad shape, or indeed even that it used to be good but it's getting worse. Rather, Canadians say that the environment is in good shape, or that it is getting a little better over time, and that they still value it enormously.

Protecting the environment

Canadians also recognize that if they are to maintain the environment that they value, it's not without cost. They have to change or sacrifice something, or change the way in which they are living. We asked both Canadians and Americans to agree or disagree with a statement that the environment can only be protected if the public is willing to make sacrifices. Canadians by a margin of 3.5 to 1 agreed with that proposition, whereas Americans were divided on it. When you talk about environmental protection, you are not talking about something that Canadians view as being without cost. They understand that it's important to them and that it may actually have an effect on them in some way.

When we asked Canadians to trade off the environment against anything, we got the same answer back over and over again--the environment is too important. Here we gave a very simple trade-off. We said that some people say that if we maintain our current environmental standards, it may actually diminish economic growth in the country, and that some other people argue we ought to relax some of our environmental laws somewhat in order to promote good economic growth. That's not a trade-off Canadians are willing to make! Canadians opt solidly for the environment, even when they recognize the cost!

Now, you might say that something as intangible as economic growth is easy to dismiss in some way. So we drove at it another way. We said, "If firms have to put on pollution abatement equipment, it may cause their cost of production to go up and they'll have to raise prices. Would you rather that the regulations stayed in place, even if it meant higher prices for some goods?" Yes, said Canadians in 1986, by a margin of 8 to 1. Canadians understand that things are passed on, so when they are saying they want strict laws about the environment, it's not just because they think that enforcing laws will mean that somebody else has to pay. They understand and, I will argue, are willing to pay a tangible price.

We asked if Canadians would favour strict environmental laws even if it meant that some firms might have to shut down and there was a loss of jobs. By a margin of 3 to 1, Canadians said yes. Americans went the other way, by a margin of almost 2 to 1. You can't overpersonalize these data--if I were to go up to an individual and say, "It's your job or a cleaner environment," it's pretty unlikely he would put his own job on the line. But it does mean, in a public policy context, that when someone who is running a plant gets up and says, "If we have to put on pollution abatement equipment it would cost us jobs," the Canadian public policy environment now says to put in pollution abatement under that circumstance. Indeed, there is a pervasive belief that when penalties are imposed on companies for violating environmental regulations, they are not severe enough (77%), as opposed to too severe (2%).

Concerns about health

All of this arises out of a series of very fundamental concerns, perhaps the most important of which is the belief that the environment affects people's health. Almost 80% of our respondents say that the quality of the air environment affects their health very much, or a fair amount. Indeed, when we asked specifically the importance of a whole range of environmental issues, the responses we got were overwhelmingly "important." Two years ago we asked an array of questions about environmental issues. Are each of the following very important, somewhat important, not very important, or not important at all? I should mention that Canadians are generally mushballs. If I ask if something is very important, somewhat important, somewhat unimportant, or very unimportant, we tend to go into the middle. As a country, we hate to stick out with an extreme answer. Well, environment is an issue that Canadians don't mind being extreme about at all. Whether the issue is contamination of drinking water, pollution of our lakes, rivers, and streams, toxins in our foods, spills of hazardous waste material, industrial and chemical waste, acid rain, air pollution, chemical additives in food, chemicals used in agriculture, the burning of municipal garbage--90 or 95% said it's very or somewhat important. We've asked in other ways about the loss of wilderness and parklands and got similar responses. No matter what the specific environmental issue is, it taps fundamental concerns about both personal health and health over generations.

Importance of the issue

If all of this is true about Canadians' views about the environment, why isn't there broader support out there for the kinds of activities that you people are concerned about? I want you to think about the following answer, as I finish my presentation: It doesn't get the support you believe it deserves and needs, because people have not been convinced it is, or do not see it as, an environmental issue. They do not see your concerns and needs relating to their picture of the country and their values about this country.

A year and a half ago, we asked Canadians, "What is the most important issue involved today in US-Canada relations?" We let them give a whole range of responses, and we categorized them into acid rain or environmental issues, trade and economic issues, or international and defence issues. This was at a time when the free trade debate was on the front page of the paper every day, when people were talking about the social survival of the country and the critical economic importance of things like free trade. What did Canadians respond was the number one transnational issue between Canada and the United States?: the environment--acid rain.

Changes in behaviour

Even when we asked Canadians, "Have environmental concerns caused you to change the way you live?," 58% said they have made major or minor changes in the way they live because of their concern over the environment. When we asked them specifically what they've done, 75% said they have reduced their energy consumption; 67% said they've changed their buying patterns of food; 58% said they've stopped using aerosol cans; 53% say they recycle; 48% say they try to buy things made of recycled material; 38% said that they have, on at least some occasions, not bought products made by firms that they thought were polluters. Some have stopped buying some fresh fruits because of their concerns about pesticides. A very small percentage said they have bought bottled water. What you are seeing is a pattern of actual changes, where people say that because of their generalized concerns they've changed their behaviour.

Environmental absolutists?

Does this mean that Canadians are what I would term "environmental absolutists"? Are we a group that wants to preserve everything just as it stands? I don't think we are environmental absolutists. We are, in fact, quite willing to talk about management of our wild resources of nature, and so on. We asked people a year ago whether mining, oil and gas exploration activities, logging, hydroelectric power development, and tourism in wilderness areas created permanent effects, temporary harm but not long-lasting effects, or no real harm or effects on the environment. Canadians don't differentiate in a really stark way between these. Were we environmental absolutists, and staunchly opposed to any use of the environment, what you would expect to see is people saying those things are an anathema. Immediately following that question we asked and found out that 75% of Canadians said that they would favour hydroelectric power development, and this is immediately following a question where we had 71% say that that had an effect on the environment.

What's going on is perhaps best shown in this question in which we gave people a choice about offshore drilling. We said, "Some people say that the risk of environmental contamination through the pollutants that might result from an oil spill or blowout are too great, and we shouldn't permit offshore drilling. Other people say that we need the energy, and that if care is taken we should proceed with offshore drilling." By a margin of about 3 to 2, Canadians said, "Let's do some offshore drilling." British Columbia was the only province with a majority opposed to it. The strongest supporters were landlocked, so there is a certain amount of self-interest evident here. But if you look at responses from provinces like Nova Scotia, where there was, at this time, very serious consideration of offshore drilling, you find you have got solid majority approval. We did some research there and found that the oil companies that were going to do drilling had convinced people not that there was no chance of pollution, but that they shared the population's values that the environment was important. Therefore, people were willing to accept that they would be as careful and prudent as they would, as individuals, because they shared an underlying value.

Recommendations to wildlife managers

Understand the public

What does all of this mean for those of you who manage wildlife? I'm going to leave you with a triple message. The first thing is that you have to understand the public, because you're dealing in a sensitive area that is very important to the Canadian public. It's important because they see what happens in the environment as affecting them in the long term, whether it is proper management of our forests and their economic impact on us, or management of our lakes and streams and water supply, or our air, or the habitat for wildlife. All of those things reflect on our fundamental long-term economic and health status, and also affect the way in which we view ourselves as a country. We view ourselves as a country that is different from other countries in large measure because we have an environment about which we care and which is exceptional. You have to know and understand and share that value with the public, and you have to know what the general public thinks. You have to understand the impact of the affected public, whether it's people who use the forests or who are employed out there, people who are in rural communities, people who deal with wildlife. You have to understand the objectives and the specific power of interest groups. You have to know people whose employment is affected by what's going on and, through those corporations, groups who are interested. You have to know how people respond as consumers. You have to look in an extraordinarily analytical way if you want public support. It's not enough just to say Canadians are pro-environment, therefore they ought to be in favour of what we stand for. You have to work at it!

Understand your strengths

The second thing is that you should understand your own strengths. The non-governmental organizations, the environmental interest groups, have enormous credibility among the general public. When we asked, "What is the most credible source of information on environmental issues to you?," 69% of Canadians said environmental and consumer groups; 23% said government; 8% said private industry. You've got a credibility and a power that you can exercise and that sometimes isn't fully exercised.

Define your issues

Finally, you have to define your issues in a way that makes sense to Canadians and reflects their fundamental values. If you are concerned about wildlife, what you need to do, in a very pragmatic way, is have Canadians recognize that wildlife is a facet of one of their core values, their concern about the nature of the Canadian environment and their pride in it, so that our image of what distinguishes Canada from other countries not only is bound up in the scenery and the cleanliness of the outdoors and the water and all of those elements of nature, but also includes its wildlife as a distinct feature. When you address Canadians, understand, above all, that what you have to do is communicate, to change attitudes, to make attitudes consistent with the objectives that you understand are important! But to do that you have to communicate in such a way that your communication is consistent with Canadians' fundamental values and images of this country.

In closing then, I have a challenge for you, and it's very simple. If Canadians are to make wildlife issues and wildlife management a fundamental concern, a primary issue, if it's to be brought with power to the political arena and put on the public policy agenda, you have a very straightforward but also very difficult task. You have to ensure that Canadians see wildlife protection and management as a part of their image of what makes Canada different, what makes Canada unique, and what they can be proud of in this country.

Reports (1)

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES OF WILD FAUNA AND FLORA (CITES)

Sixth Meeting of the Conference of the Parties to CITES

Representation

The major event during 1987 was the hosting by Canada of the Sixth Meeting of the Conference of the Parties to CITES in Ottawa on 12-24 July. The Meeting, held in the Ottawa Congress Centre, was attended by 84 of the 95 Party states to CITES, 21 non-party governments and governmental organizations, plus 105 other groups and organizations. With over 700 people participating, the Ottawa Meeting drew over 50% more delegates than did the 1985 Buenos Aires Meeting.

Canada was well represented at the Meeting, not only in terms of the official Canadian delegation, but also through the large number of provincial and territorial governments and non-governmental organizations granted observer status. The Canadian delegation of 15, headed by the Director General of the Canadian Wildlife Service (CWS), included five CWS officers, two from External Affairs, two from Fisheries and Oceans, one from Customs and Excise, one from Indian and Northern Affairs, two provincial-territorial government officers, Dr. N. Mrosovsky from the University of Toronto as the reptiles advisor, and Dr. David A. Munro as Chairman of the Meeting. More Canadians participated as observers in Ottawa than at any previous Meetings of the Conference of the Parties to CITES. At the federal level, Environment Canada, External Affairs, Fisheries and Oceans, the National Museum of Natural Sciences, and the Canadian International Development Agency sent observer delegations. The provinces and territories were represented by governmental delegations from Alberta, British Columbia, Ontario, Quebec, the Northwest Territories, and the Yukon Territory. Twenty-five Canadian non-governmental organizations also participated in the Sixth Meeting of the Conference of the Parties to CITES.

Proposals

The Parties tabled 149 proposals to amend the Appendices. Of these, 41 proposals were withdrawn and 20 were rejected. Included in the proposals accepted was one removal of a species from Appendix I and 36 removals from Appendix II. There were three transfers from Appendix I to Appendix II; 27 additions of species or entire families to Appendix II; 11 additions to Appendix I; and 10 transfers from Appendix II to Appendix I.

Of concern to Canada was a Netherlands proposal to include walrus, now covered by a Canadian Appendix III listing, in Appendix II. The range states of the species, including Canada, were able to persuade the Netherlands to withdraw the proposal, as the species is adequately managed in all appropriate jurisdictions. Other proposals of concern to Canada were an Ecuadorian proposal to include all of the approximately 350 species of hummingbirds in Appendix II and a US proposal to include all North American pitcherplants in Appendix II. Both proposals were successful. As there is no known or suspected trade in the five species of hummingbirds nesting in Canada, and because Canada supported the pitcherplant proposal, the additions will not cause any problem in Canada.

Finances

A considerable amount of time during the Meeting was spent discussing the finances of the Secretariat. The Secretariat's proposed budget of (US) $3 230 000 for 1988 and 1989 was (US) $1 760 944 above the approved 1986/87 budget and caused considerable concern among the Parties. The Secretariat explained that much of the increase resulted from fluctuations of the US dollar in relation to the Swiss franc (Swiss francs 2.64 to the US dollar in 1985 when the 1986/87 budget was approved, compared with Swiss francs 1.5 to the US dollar in 1987), and that an additional (US) $660 000 was being requested for new projects. After very considerable debate in committee and in plenary, the budget for the biennium 1988/89 was approved at (US) $3 000 000. This means that the Canadian contribution to the Trust Fund will increase from (US) $24 972 in 1987 to (US) $49 618 in 1988 and in 1989.

Establishment of committees

Because of a lack of procedures and the very haphazard way CITES committees have been established at previous meetings of the Parties, Canada, with the co-operation of Switzerland, the United Kingdom, and Zimbabwe, tabled a proposal for a resolution respecting the establishment of committees. The proposal was amended and shortened by the Parties, resulting in a resolution that will have far-reaching but positive effects on the functioning of CITES between biennial meetings. The amended resolution, accepted unanimously by the Parties, provides for:

- rules for the establishment of committees;

- establishment of the Standing Committee of the Parties;

- establishment of an Animals Committee;

- establishment of a Plants Committee;

- establishment of an Identification Manual Committee; and

- establishment of a Nomenclature Committee.

All committees will operate only between biennial meetings of the Parties. The Standing Committee is the senior committee and will provide general policy and operational direction to the Secretariat, oversee the development and execution of the Secretariat's budget, and oversee the operations of all other committees.

The Animals Committee and the Plants Committee are scientific committees with mandates to assist the Secretariat and the Parties on the scientific aspects of species included in or proposed for listing in the Appendices. The mandate of the Identification Manual Committee is to produce identification guides for species listed in the Appendices, and the Nomenclature Committee will ensure that listed species or species proposed for listing in the Appendices are referred to by the correct scientific name.

Canada has been asked by the Chairman of the Standing Committee to chair a working group of Canada, the United Kingdom, and Indonesia to advise the Standing Committee on matters concerning general policy and operational direction of the Secretariat and matters concerning the development and execution of the Secretariat budget.

CITES Transportation Working Group

In other international developments, Canada was requested to continue chairing the CITES Transportation Working Group, which will report to the Standing Committee between meetings and to the next biennial meeting of the Parties. The CITES Administrator, as Chairman of the Working Group, met with the International Air Transport Association Live Animals Board twice in Montreal and twice in Geneva during 1987 and attended the San Francisco annual meeting of the Animal Air Transportation Association to discuss CITES and the improvement by airlines in the transportation of CITES species.

Enforcement

In Canada, during January 1987, responsibility for the enforcement-related aspects of CITES was transferred from the Program, Marketing and Operational Services Branch to the Legislation, Regulations and Enforcement (LRE) Division of the Migratory Birds and Wildlife Conservation Branch. Under the new arrangement, LRE will be the primary CWS contact for Customs and Excise and the RCMP concerning investigations, the detention, seizure, and forfeiture of CITES goods, and/or providing training to law enforcement agencies with respect to enforcement of CITES. The CITES Administrator will continue to coordinate the CITES program in Canada, look after the international aspects of CITES, Canadian CITES permit policy, and the issuance of CITES permits, and provide training to federal, provincial, and territorial authorities concerning the issue of CITES permits.

North American Region CITES Meeting

During February 1987, Canada chaired a North American Region CITES Meeting in Winnipeg, Manitoba. The meeting was well attended by five CITES representatives from the United States, the Director General for Wildlife from Mexico, and an officer from the CITES Secretariat. The Canadian team included four officers from CWS and one each from the Department of External Affairs, Canada Customs, the RCMP, and Fisheries and Oceans. Also in attendance were representatives from the Yukon, Northwest Territories, and Manitoba governments. The agenda of the meeting included problem areas between Canada, the United States, and Mexico concerning enforcement of the Convention, a review of Appendices amendment proposals and resolutions to be discussed at the Sixth Meeting in Ottawa (July), and positions to be taken by Canada and by the United States concerning the proposals.

Meeting of Management and Scientific Authorities

The annual meeting of Canadian federal, provincial, and territorial Management and Scientific Authorities took place in Hull, Quebec, 28-29 October 1987. The meeting reviewed the results of the Sixth Meeting of the Conference of the Parties to CITES (July) and started preparations for the Seventh Meeting of the Conference of the Parties to CITES, scheduled for Jakarta, Indonesia, 9-20 October 1989. Provincial and territorial government representatives attending the meeting nominated Mr. D. Brackett from the Northwest Territories and Mr. R. Wenting from Ontario to be the provincial-territorial government representatives to advise the federal government of provincial and territorial concerns at international meetings for the biennium 1988/89.

Permits

During 1987, the federal government issued 87 (71)[1] Transit Certificates for the temporary import or export of CITES specimens, and 40 (42) Scientific Certificates for the exchange of prepared and catalogued specimens between CITES registered scientists or scientific research organizations. During the same period, the following CITES export and import permits were issued:

Authority	Export	Import
Federal	1844 (1704)[1]	62 (85)[1]
Alberta	146 (103)	-
British Columbia	760 (875)	-
Manitoba	101 (142)	-
New Brunswick	3 (3)	-
Newfoundland	0 (0)	-
Nova Scotia	1 (3)	-
Ontario	1024 (974)	-
Prince Edward Island	25 (10)	-
Quebec	1278 (1236)	-
Saskatchewan	49 (22)	-
Northwest Territories	24 (34)	-
Yukon	208 (168)	-
Totals	5463 (5256)	62 (85)

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[1] Comparable 1986 figures are shown in parentheses.

Reports (2)

COMMITTEE ON THE STATUS OF ENDANGERED WILDLIFE IN CANADA (COSEWIC)

William T. Munro
Chairperson

The 11th report of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) is provided for your consideration. COSEWIC is mandated by the Federal-Provincial Wildlife Conference to determine the status in Canada of wild species whose future may be in doubt and to release the information upon which the declaration of status is based.

Retiring chairperson

J.A. (Tony) Keith retired as Chairperson after a decade of leadership. Thanks were expressed for a job well done.

New chairperson

W.T. (Bill) Munro, BC Wildlife Branch, was elected to a two-year term as Chairperson.

Classification actions

COSEWIC assigned status to 33 species and populations on 12-13 April 1988. Two of the species had been previously studied by COSEWIC and were re-evaluated this year. The Committee decided that five of the 33 species did not require designation at this time.

Committee decisions, based on status reports and agreed status definitions, were as follows:

RARE

Plants

Dense Blazing Star	Liatris spicata
Indian Plantain	Cacalia plantaginea
Macoun's Meadowfoam	Limnanthes macounii
Western Silver-leaf Aster	Virgulus sericeus

Birds

Flammulated Owl	Otus flammeolus
Least Bittern	Ixobrychus exilis

RARE (Cont'd)

Fish and marine mammals

Kiyi	*Coregonus kiyi*
Umatilla Dace	*Rhinichthys umatilla*

Mammals

Black-tailed Prairie Dog (Re-evaluation--confirmed as "rare")	*Cynomys ludovicianus*
Fringed Myotis	*Myotis thysanodes*
Gaspe Shrew	*Sorex gaspensis*
Keen's Long-eared Bat	*Myotis keenii*
Pallid Bat	*Antrozous pallidus*
Southern Flying Squirrel	*Glaucomys volans*
Spotted Bat	*Euderma maculatum*

THREATENED

Plants

Colicroot	*Aletris farinosa*
Ginseng	*Panax quinquefolium*
Nodding Pogonia	*Triphora trianthophora*
Pitcher's Thistle	*Cirsium pitcheri*

Fish and marine mammals

Black Redhorse	*Moxostoma duquesnei*
Blackfin Cisco	*Coregonus nigripinnis*
Enos Lake Stickleback	*Gasterosteus* spp.
Beluga (White Whale) Eastmain Stock[1]	*Delphinapterus leucas*

Mammals

Wood Bison (Re-evaluation--previously "endangered")	*Bison bison athabascae*

ENDANGERED

Plants

Gattinger's Agalinis	*Agalinis gattingeri*
Skinner's Agalinis	*Agalinis skinneriana*

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[1] To be re-examined in 1989 on the basis of additional information available.

ENDANGERED (Cont'd)

Fish and marine mammals

Beluga (White Whale) Ungava Bay Stock[1]	*Delphinapterus leucas*

EXTINCT

Fish and marine mammals

Deepwater Cisco	*Coregonus johannae*

Status reports were also prepared on the following species, and the Committee decided no designation was required at this time:

Birds

Black Tern	*Chlidonias niger*

Fish and marine mammals

Bloater	*Coregonus hoyi*
Hornyhead Chub	*Nocomis biguttatus*
Redfin Shiner	*Nocomis umbratilis*
River Chub	*Nocomis micropogoh*

The "official" COSEWIC Lists have been updated and include species added in April 1988 (see Appendices 1 and 2). Species "on the move" upward or downward will be marked on the list with a footnote.

Table 1. COSEWIC status designations as of April 1988.

Category (status)	Birds	Mammals (terrestrial)	Mammals (marine)	Fish	Plants	Amphibians and reptiles	Total
Rare	16	13	3	22	18	1	73
Threatened	6	5	2	9	17	-	39
Endangered	8	2	5	3	17	1	36
Extirpated	-	2	2	2	1	-	7
Extinct	3	1	1	4	-	-	9
Total	33	23	13	40	53	2	164

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[1] To be re-examined in 1989 on the basis of additional information available.

In addition, COSEWIC has reviewed status reports on 36 species and determined that no designation was required at this time (Plants--1; Birds--12; Mammals (terrestrial)--7; Mammals (marine)--8; Fish--8).

Other COSEWIC highlights

(1) COSEWIC notes with gratitude the contributions of the Fish and Marine Mammals, Plants, Mammals, and Birds Subcommittee chairmen. Unfortunately, it was another unproductive year for the Reptile and Amphibian Subcommittee. Bill Munro is to investigate.

(2) The Wood Bison (*Bison bison athabascae*) was downlisted from "endangered" to "threatened." The geographically separate populations are reproducing steadily, but some threats of disease still exist.

(3) Unfortunately, one additional fish species, the Deepwater Cisco (*Coregonus johannae*), was designated extinct. This species was indigenous to the Great Lakes basin and occurred only in Lakes Michigan and Huron. Intense exploitation by the commercial fishery led to its extirpation from Lake Michigan and probably also from Lake Huron.

(4) COSEWIC thanks Merlin Shoesmith for his "Principles and Examples of Criteria for Changing Status of COSEWIC Species." This document was adopted by the Committee and will be included in the Procedures Manual (see Appendix 3).

(5) Amendments to COSEWIC status definitions are recommended for the approval of Wildlife Directors. The major change is deletion of the "rare" category and replacing it with a "vulnerable" category (see Appendix 4).

(6) COSEWIC status report summaries will be published in 1989 in a State of Environment Report. The book will present a national perspective on endangered species. Endangered species will be regarded largely for their value in indicating the health of ecosystems.

(7) The COSEWIC Chairperson is to seek direction from federal-provincial Wildlife Directors on whether or not the Committee can consider invertebrate species as they come to the Committee through the efforts of other individuals, i.e., National Capital Commission.

(8) A Task Force chaired by Dave Mossop, Yukon Wildlife Branch, will investigate the problem of what should be done about recent invaders (species arriving in Canada within the last 50 years). A report will be prepared by 31 January 1989 and discussed at the April 1989 annual meeting.

(9) A Working Group, chaired by Irene Bowman, Ontario Wildlife Branch, will investigate the feasibility of COSEWIC becoming involved with the designation of specific habitats. The group is

to submit a report by 31 January 1989 for discussion at the April 1989 annual meeting.

(10) Funding again was an area of concern. I request the directors of provincial and territorial wildlife agencies to again consider how they might provide additional monies to produce COSEWIC status reports, or to provide the time of provincial or territorial staff to write status reports.

(11) Bob Campbell asked for a decision of Wildlife Directors on whether or not RENEW is going to consider all species.

Appendix 1

LIST OF SPECIES WITH DESIGNATED STATUS UP TO APRIL 1988
LISTE D'ESPÈCES AVEC LEUR STATUT DÉSIGNÉ JUSQU'EN AVRIL 1988

PLANTS/PLANTES

Species/Espèce	Scientific name/ Nom scientifique	French name/ Nom français	Status	Date	Statut
American Chestnut	*Castanea dentata*	Châtaignier d'Amérique	Threatened	87	Menacée
American Water-willow	*Justicia americana*	Carmantine d'Amérique	Threatened	84	Menacée
Blue Ash	*Fraxinus quadrangulata*	Frêne bleu	Threatened	83	Menacée
Blue-eyed Mary	*Collinsia verna*	Collinsie bicolore	Extirpated	87	Déracinée
Bluehearts	*Buchnera americana*	Buchnera d'Amérique	Threatened	85	Menacée
Broad Beech-fern	*Phegopteris hexagonaptera*	Thélyptéride hexagonale	Rare	83	Rare
Colicroot	*Aletris farinosa*	Aletris farineuse	Threatened	88	Menacée
Cucumber Tree	*Magnolia acuminata*	Magnolier acuminé	Endangered	84	En danger de disparition
Dense Blazing Star	*Liatris spicata*	Liatris à épis	Rare	88	Rare
Dwarf Hackberry	*Celtis tenuifolia*	Micocoulier à feuilles étroites	Rare	85	Rare
Eastern Mountain Avens	*Geum peckii*	Benoite de l'Est	Endangered	86	En danger de disparition
Eastern Prickly Pear Cactus	*Opuntia humifusa*	Raquette de l'Est	Endangered	85	En danger de disparition
Few-flowered Club-rush	*Scirpus verecundus*	Scirpe timide	Rare	86	Rare
Furbish's Lousewort	*Pedicularis furbishiae*	Pédiculaire de Furbish	Endangered	80	En danger de disparition
Gattinger's Agalinis	*Agalinis gattingeri*	Agalinis de Gattinger	Endangered	88	En danger de disparition
Giant Helleborine	*Epipactis gigantea*	Épipactis géant	Threatened	84	Menacée
Ginseng	*Panax quinquefolium*	Ginseng	Threatened	88	Menacée
Golden Crest	*Lophiola aurea*	Lophiolie d'Amérique	Threatened	87	Menacée
Green Dragon	*Arisaema dracontium*	Ariséma dragon	Rare	84	Rare
Heart-leaved Plantain	*Plantago cordata*	Plantain à feuilles cordées	Endangered	85	En danger de disparition
Hill's Pondweed	*Potamogeton hillii*	Potamot de Hill	Rare	86	Rare
Hoary Mountain Mint	*Pycnanthemum incanum*	Pycnanthème gris	Endangered	86	En danger de disparition
Hop Tree	*Ptelea trifoliata*	Orme de Samarie	Rare	84	Rare
Indian-plantain	*Cacalia plantaginea*	Cacalie tubéreuse	Rare	88	Rare
Kentucky Coffee Tree	*Gymnocladus dioica*	Chicot Févier	Threatened	83	Menacée
Large Whorled Pogonia	*Isotria verticillata*	Grande pogonie verticillée	Endangered	86	En danger de disparition
Lilaeopsis	*Lilaeopsis chinensis*	Lilaeopsis	Rare	87	Rare
Macoun's Meadowfoam	*Limnanthes macounii*	Limnanthe de Macoun	Rare	88	Rare
Mosquito Fern	*Azolla mexicana*	Azolle du Mexique	Threatened	84	Menacée
Nodding Pogonia	*Triphora trianthophora*	Triphore penché	Threatened	88	Menacée
Pink Coreopsis	*Coreopsis rosea*	Coréopsis rose	Endangered	84	En danger de disparition
Pink Milkwort	*Polygala incarnata*	Polygale incarnat	Endangered	84	En danger de disparition
Pitcher's Thistle	*Cirsium pitcheri*	Chardon de Pitcher	Threatened	88	Menacée
Plymouth Gentian	*Sabatia kennedyana*	Sabatia de Kennedy	Threatened	84	Menacée
Prairie Rose	*Rosa setigera*	Rosier des Prairies	Rare	86	Rare
Prairie White-fringed Orchid	*Platanthera leucophaea*	Platanthère blanchâtre	Rare	86	Rare
Red Mulberry	*Morus rubra*	Mûrier rouge	Threatened	87	Menacée
Shumard Oak	*Quercus shumardii*	Chêne de Shumard	Rare	84	Rare
Skinner's Agalinis	*Agalinis skinneriana*	Agalinis de Skinner	Endangered	88	En danger de disparition
Slender Bush Clover	*Lespedeza virginica*	Lespédéze de Virginie	Endangered	86	En danger de disparition
Small White Lady's Slipper	*Cypripedium candidum*	Cypripède blanc	Endangered	81	En danger de disparition
Small Whorled Pogonia	*Isotria medeoloides*	Petite pogonie verticillée	Endangered	82	En danger de disparition
Soapweed	*Yucca glauca*	Yucca glauque	Rare	85	Rare
Southern Maidenhair Fern	*Adiantum capillus-veneris*	Adiante cheveux-de-Vénus	Endangered	84	En danger de disparition
Spotted Wintergreen	*Chimaphila maculata*	Chimaphile maculé	Endangered	87	En danger de disparition
Swamp Rose Mallow	*Hibiscus moscheutos*	Ketmie des marais	Rare	87	Rare
Sweet Pepperbush	*Clethra alnifolia*	Clèthre à feuilles d'Aulne	Threatened	86	Menacée
Thrift	*Armeria maritima interior*	Armeria de l'Athabaska	Threatened	81	Menacée
Tyrrell's Willow	*Salix planifolia tyrrellii*	Saule de Tyrrell	Threatened	81	Menacée
Victorin's Gentian	*Gentiana victorinii*	Gentiane de Victorin	Rare	87	Rare
Victorin's Water Hemlock	*Cicuta maculata victorinii*	Cicutaire de Victorin	Rare	87	Rare
Water-pennywort	*Hydrocotyle umbellata*	Hydrocotyle à ombelle	Endangered	85	En danger de disparition
Western Silver-leaf Aster	*Virgulus sericeus*	Aster soyeux	Rare	88	Rare

BIRDS/OISEAUX

Species/Espèce	Scientific name/ Nom scientifique	French name/ Nom français	Status	Date	Statut
Burrowing Owl	*Athene cunicularia*	Chouette des terriers	Threatened	79	Menacée
Caspian Tern	*Sterna caspia*	Sterne caspienne	Rare	78	Rare
Common Barn Owl	*Tyto alba*	Effraie	Rare	84	Rare
Cooper's Hawk	*Accipiter cooperii*	Épervier de Cooper	Rare	83	Rare
Eastern Bluebird	*Sialia sialis*	Merle-bleu à poitrine rouge	Rare	84	Rare
Eskimo Curlew	*Numenius borealis*	Courlis esquimau	Endangered	78	En danger de disparition
Ferruginous Hawk	*Buteo regalis*	Buse rouilleuse	Threatened	80	Menacée
Flammulated Owl	*Otus flammeolus*	Petit-Duc nain	Rare	88	Rare

BIRDS/OISEAUX (Cont'd)

Species/Espèce	Scientific name/ Nom scientifique	French name/ Nom français	Status	Date	Statut
Great Auk[1]	*Pinguinus impennis*	Grand pingouin[1]	Extinct	85	Disparue
Great Gray Owl	*Strix nebulosa*	Chouette cendrée	Rare	79	Rare
Greater Prairie-Chicken	*Tympanuchus cupido pinnatus*	Grande poule-des-prairies	Endangered	78	En danger de disparition
Henslow's Sparrow	*Ammodramus henslowii*	Pinson de Henslow	Threatened	84	Menacée
Ipswich Sparrow	*Passerculus sandwichensis princeps*	Pinson d'Ipswich	Rare	79	Rare
Ivory Gull	*Pagophila eburnea*	Mouette blanche	Rare	79	Rare
King Rail	*Rallus elegans*	Râle élégant	Rare	85	Rare
Kirtland's Warbler	*Dendroica kirtlandii*	Fauvette de Kirtland	Endangered	79	En danger de disparition
Labrador Duck[1]	*Camptorhynchus labradorius*	Canard du Labrador[1]	Extinct	85	Disparue
Least Bittern	*Ixobrychus exilis*	Petit Butor	Rare	88	Rare
Loggerhead Shrike	*Lanius ludovicianus*	Pie-grièche migratrice	Threatened	86	Menacée
Mountain Plover	*Charadrius montanus*	Pluvier montagnard	Endangered	87	En danger de disparition
Passenger Pigeon[1]	*Ectopistes migratorius*	Tourte[1]	Extinct	85	Disparue
Peregrine Falcon: *anatum*	*Falco peregrinus anatum*	Faucon pèlerin: *anatum*	Endangered	78	En danger de disparition
Peregrine Falcon: *pealei*	*Falco peregrinus pealei*	Faucon pèlerin: *pealei*	Rare	78	Rare
Peregrine Falcon: *tundrius*	*Falco peregrinus tundrius*	Faucon pèlerin: *tundrius*	Threatened	78	Menacée
Piping Plover	*Charadrius melodus*	Pluvier siffleur	Endangered	85	En danger de disparition
Prairie Warbler	*Dendroica discolor*	Fauvette des prés	Rare	85	Rare
Prothonotary Warbler	*Protonotaria citrea*	Fauvette orangée	Rare	84	Rare
Red-shouldered Hawk	*Buteo lineatus*	Buse à épaulettes rousses	Rare	83	Rare
Roseate Tern	*Sterna dougallii*	Sterne rosée	Threatened	86	Menacée
Ross' Gull	*Rhodostethia rosea*	Mouette rosée	Rare	81	Rare
Spotted Owl	*Strix occidentalis caurina*	Chouette tachetée	Endangered	86	En danger de disparition
Trumpeter Swan	*Cygnus buccinator*	Cygne trompette	Rare	78	Rare
Whooping Crane	*Grus americana*	Grue blanche d'Amérique	Endangered	78	En danger de disparition

FISH AND MARINE MAMMALS/POISSONS ET MAMMIFÈRES MARINS

Species/Espèce	Scientific name/ Nom scientifique	French name/ Nom français	Status	Date	Statut
Acadian Whitefish	*Coregonus canadensis*	Corégone d'Acadie	Endangered	84	En danger de disparition
Aurora Trout	*Salvelinus fontinalis*	Omble de fontaine (sous-espèce aurora)	Endangered	87	En danger de disparition
Banff Longnose Dace	*Rhinichthys cataractae smithi*	Naseux des rapides de Banff	Extinct	87	Disparue
Beluga (White Whale)	*Delphinapterus leucas*	Béluga (Baleine blanche)			
(St. Lawrence River stock)		(Pop. du fleuve Saint-Laurent)	Endangered	83	En danger de disparition
(Ungava Bay stock)[2]		(Pop. de la baie d'Ungava)[2]	Endangered	88	En danger de disparition
(Eastmain stock)[2]		(Pop. d'Eastmain)[2]	Threatened	88	Menacée
Bigmouth Shiner	*Notropis dorsalis*	Méné à grande bouche	Rare	85	Rare
Black Redhorse	*Moxostoma duquesnei*	Suceur noir	Threatened	88	Menacée
Blackfin Cisco	*Coregonus nigripinnis*	Cisco à nageoires noires	Threatened	88	Menacée
Blackstripe Topminnow	*Fundulus notatus*	Fondule rayée	Rare	85	Rare
Blue Walleye	*Stizostedion vitreum*	Doré bleu	Extinct	85	Disparue
Blue Whale	*Balaenoptera musculus*	Rorqual bleu	Rare	83	Rare
Bowhead Whale	*Balaena mysticetus*	Baleine boréale	Endangered	86	En danger de disparition
Brindled Madtom	*Noturus miurus*	Chat-fou tacheté	Rare	85	Rare
Central Stoneroller	*Compostoma anomalum*	Roule-caillou	Rare	85	Rare
Charlotte Unarmoured Stickleback	*Gasterosteus aculeatus*	Épinoche lisse des îles de la Reine-Charlotte	Rare	83	Rare
Copper Redhorse	*Moxostoma hubbsi*	Suceur cuivré	Threatened	87	Menacée
Deepwater Cisco	*Coregonus johannae*	Cisco de profondeur	Extinct	88	Disparue
Enos Lake Stickleback	*Gasterosteus* spp.	Épinoche du lac Enos	Threatened	88	Menacée
Fin Whale	*Balaenoptera physalus*	Rorqual commun	Rare	87	Rare
Giant Stickleback	*Gasterosteus* sp.	Épinoche géante	Rare	80	Rare
Gravel Chub	*Hybopsis x-punctata*	Gravelier	Extirpated	87	Déracinée
Gray Whale	*Eschrichtius robustus*	Baleine grise de Californie			
(Atlantic stock)		(Pop. de l'Atlantique)	Extirpated	87	Déracinée
Great Lakes Deepwater Sculpin	*Myoxocephalus thompsoni*	Chabot de profondeur des Grands Lacs	Threatened	87	Menacée

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[1] Based on historical fact.
Fondé sur des faits historiques.

[2] To be re-examined in 1989 on the basis of additional information available.
À réexaminer en 1989 selon les renseignements supplémentaires disponibles.

FISH AND MARINE MAMMALS/POISSONS ET MAMMIFÈRES MARINS (Cont'd)

Species/Espèce	Scientific name/ Nom scientifique	French name/ Nom français	Status	Date	Statut
Green Sturgeon	*Acipenser medirostris*	Esturgeon vert	Rare	87	Rare
Humpback Whale	*Megaptera novaeangliae*	Rorqual à bosse			
(North Pacific)		(du Pacifique Nord)	Threatened	85	Menacée
(Western North Atlantic)		(de l'Atlantique Nord-Ouest)	Rare	85	Rare
Kiyi	*Coregonus kiyi*	Kiyi	Rare	88	Rare
Lake Lamprey	*Lampetra macrostoma*	Lamproie de lac	Rare	86	Rare
Lake Simcoe Whitefish	*Coregonus clupeaformis*	Corégone du lac Simcoe	Threatened	87	Menacée
Longjaw Cisco	*Coregonus alpenae*	Cisco à grande bouche	Extinct	85	Disparue
Pacific Sardine	*Sardinops sagax*	Sardine du Pacifique	Rare	87	Rare
Paddlefish	*Polyodon spathula*	Spatulaire	Extirpated	87	Déracinée
Pugnose Minnow	*Notropis emilae*	Petit-bec	Rare	85	Rare
Pugnose Shiner	*Notropis anogenus*	Méné camus	Rare	85	Rare
Redside Dace	*Clinostomus elongatus*	Méné long	Rare	87	Rare
Right Whale	*Eubalena glacialis*	Baleine noire	Endangered	85	En danger de disparition
River Redhorse	*Moxostoma carinatum*	Suceur ballot	Rare	87	Rare
Salish Sucker	*Catostomus* sp.	Meunier de Salish	Endangered	86	En danger de disparition
Sea Mink	*Mustela macrodon*	Vison de mer	Extinct	86	Disparue
Sea Otter	*Enhydra lutris*	Loutre de mer	Endangered	86	En danger de disparition
Shorthead Sculpin	*Cottus confusus*	Chabot à tête courte	Threatened	84	Menacée
Shortjaw Cisco	*Coregonus zenithicus*	Cisco à mâchoires égales	Threatened	87	Menacée
Shortnose Cisco	*Coregonus reighardi*	Cisco à museau court	Threatened	87	Menacée
Shortnose Sturgeon	*Acipenser brevirostrum*	Esturgeon à museau court	Rare	80	Rare
Silver Chub	*Hybopsis storeriana*	Méné à grandes écailles	Rare	85	Rare
Silver Shiner	*Notropis photogenis*	Méné miroir	Rare	87	Rare
Speckled Dace	*Rhinichthys osculus*	Naseux moucheté	Rare	80	Rare
Spotted Gar	*Lepisosteus oculatus*	Lépisosté tacheté	Rare	83	Rare
Spotted Sucker	*Minytrema melanops*	Meunier tacheté	Rare	83	Rare
Squanga Whitefish	*Coregonus* sp.	Corégone du Squanga	Rare	87	Rare
Umatilla Dace	*Rhinichthys umatilla*	Naseux Umatilla	Rare	88	Rare
Walrus (N.W. Atlantic pop.)	*Odobenus rosmarus*	Morse (Pop. du nord-ouest de l'Atlantique)	Extirpated	87	Déracinée

REPTILES AND AMPHIBIANS/REPTILES ET AMPHIBIENS

Species/Espèce	Scientific name/ Nom scientifique	French name/ Nom français	Status	Date	Statut
Fowler's Toad	*Bufo woodhousii fowleri*	Crapaud de Fowler	Rare	86	Rare
Leatherback Turtle	*Dermochelys coriacea*	Tortue luth	Endangered	81	En danger de disparition

MAMMALS/MAMMIFÈRES

Species/Espèce	Scientific name/ Nom scientifique	French name/ Nom français	Status	Date	Statut
Black-footed Ferret	*Mustela nigripes*	Putois d'Amérique	Extirpated	78	Déracinée
Black-tailed Prairie Dog	*Cynomys ludovicianus*	Chien de prairie	Rare	88	Rare
Eastern Cougar	*Felis concolor couguar*	Couguar de l'Est	Endangered	78	En danger de disparition
Eastern Mole	*Scalopus aquaticus*	Taupe à queue glabre	Rare	80	Rare
Fringed Myotis	*Myotis thysanodes*	Chauve-souris à queue frangée	Rare	88	Rare
Gaspé Shrew	*Sorex gaspensis*	Musaraigné de Gaspé	Rare	88	Rare
Grey Fox	*Urocyon cinereoargenteus*	Renard gris	Rare	79	Rare
Keen's Long-eare[illegible]	*Myotis keenii*	Chauve-souris de Keen	Rare	88	Rare
Newfoundland Pi[illegible]	*Martes americana atrata*	Martre d'Amérique (Pop. de Terre-Neuve)	Threatened	86	Menacée
Pallid Bat	*Antrozous pallidus*	Chauve-souris blonde	Rare	88	Rare
Peary Caribou	*Rangifer tarandus pearyi*	Caribou de Peary	Threatened	79	Menacée
Plains Pocket Go[illegible]	*Geomys bursarius*	Gaufre brun	Rare	79	Rare
Prairie Long-t[illegible]el	*Mustela frenata longicauda*	Belette à longue queue (des Prairies)	Threatened	82	Menacée
Queen Charlotte [illegible] Ermine	*Mustela erminea haidarum*	Hermine des îles de la Reine-Charlotte	Rare	84	Rare
Southern Flying Squirrel	*Glaucomys volans*	Petit polatouche	Rare	88	Rare
Spotted Bat	*Euderma maculatum*	Oreillard maculé	Rare	88	Rare
Swift Fox	*Vulpes velox*	Renard véloce	Extirpated	78	Déracinée
Vancouver Island Marmot	*Marmota vancouverensis*	Marmotte de l'île Vancouver	Endangered	78	En danger de disparition
Wolverine	*Gulo gulo*	Carcajou	Rare	82	Rare
Wood Bison[1]	*Bison bison athabascae*	Bison des bois[1]	Threatened	88	Menacée
Woodland Caribou: (by population)	*Rangifer tarandus caribou*	Caribou des bois (par population)			
Western Woodland Caribou		Caribou des bois (Pop. de l'Ouest)	Rare	84	Rare
Maritime Woodland Caribou		Caribou des bois (Pop. maritime)	Threatened	84	Menacée
Dawson Woodland Caribou	*R. t. dawsoni*	Caribou de Dawson	Extinct	84	Disparue

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[1] Downlisted from endangered, recovering.
Catégorie améliorée par rapport à "en danger de disparition," espèce en voie de rétablissement.

Appendix 2

REPORTS ACCEPTED - NO DESIGNATION REQUIRED
RAPPORTS ACCEPTÉS - AUCUNE DÉSIGNATION REQUISE

PLANTS/PLANTES

Species/Espèce	Scientific name/ Nom scientifique	French name/ Nom français	Date
False Mermaid	Floerkea proserpinacoides	Fausse proserpine	84

BIRDS/OISEAUX

Species/Espèce	Scientific name/ Nom scientifique	French name/ Nom français	Date
Bald Eagle	Haliaeetus leucocephalus	Aigle à tête blanche	84
Black Tern	Chlidonias niger	Sterne noire	88
Double-crested Cormorant	Phalacrocorax auritus	Cormoran à aigrettes	78
Eastern Screech-Owl	Otus asio	Petit-Duc maculé	86
Golden Eagle	Aquila chrysaetos	Aigle doré	87
Greater Sandhill Crane	Grus canadensis	Grue du Canada	79
Gyrfalcon	Falco rusticolus	Gerfaut	87
Merlin	Falco columbarius	Faucon émerillon	85
Prairie Falcon	Falco mexicanus	Faucon des prairies	82
Red-necked Grebe	Podiceps grisegena	Grèbe jougris	82
Sharp-shinned Hawk	Accipiter striatus	Épervier brun	86
American White Pelican[1]	Pelecanus erythrorhynchos	Pélican blanc d'Amérique[1]	87

FISH AND MARINE MAMMALS/POISSONS ET MAMMIFÈRES MARINS

Species/Espèce	Scientific name/ Nom scientifique	French name/ Nom français	Date
Beaufort Sea White Whale (Beluga)	Delphinapterus leucas	Baleine blanche de la mer de Beaufort (Béluga)	85
Bloater	Coregonus hoyi	Cisco de fumage	88
Blueback Herring	Alosa aestivalis	Alose d'été	80
California Sea Lion	Zalophus californianus	Otarie de Californie	87
Gray Whale (N.E. Pacific stock)	Eschrichtius robustus	Baleine grise de Californie (Pop. du Pacifique Nord-Est)	87
Green Sunfish	Lepomis cyanellus	Crapet vert	87
Hooded Seal	Cystophora cristata	Phoque à capuchon	86
Hornyhead Chub	Nocomis biguttatus	Tête à taches rouges	88
Lake Sturgeon	Acipenser fulvescens	Esturgeon jaune	86
Longear Sunfish	Lepomis megalotis	Crapet à longues oreilles	87
Narwhal	Monodon monoceros	Narval	87
Northern Elephant Seal	Mirounga angustirostris	Éléphant de mer	86
Redfin Shiner	Notropis umbratilis	Méné d'ombre	88
River Chub	Nocomis micropogon	Méné bâton	88
Steller's Sea Lion	Eumetopias jubatus	Otaire de Steller	87
Walrus (Eastern Arctic pop.)	Odobenus rosmarus	Morse (Pop. de l'Arctique Est)	87

MAMMALS/MAMMIFÈRES

Species/Espèce	Scientific name/ Nom scientifique	French name/ Nom français	Date
American Badger	Taxidea taxus	Blaireau d'Amérique	79
Fox Squirrel	Sciurus niger	Écureuil fauve	79
Grizzly Bear	Ursus arctos	Ours brun	79
Mountain Beaver	Aplodontia rufa	Castor de montagne	84
Polar Bear	Ursus maritimus	Ours blanc	87
Woodland Caribou (by population)	Rangifer tarandus caribou	Caribou des bois (par population)	
Northeastern Woodland Caribou		Caribou des bois du nord-est du Canada	84
Newfoundland Woodland Caribou		Caribou des bois de Terre-Neuve	84

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[1] Downlisted from threatened, recovering.
Catégorie améliorée par rapport à "menacée," espèce en voie de rétablissement.

Appendix 3

PRINCIPLES FOR CHANGING STATUS OF SPECIES ON THE COSEWIC LIST

1. Recommendations for uplisting and downlisting criteria will be incorporated into each new status report as a distinct subject heading. These recommendations should be considered by recovery teams.

2. For extirpated, endangered, or threatened species, downlisting requires evidence that the particular activity that placed the species in danger is regulated or is no longer operative.

3. A detailed status update based on the most recent biological information, habitat conditions, and population status will be required whenever a change in status is proposed.

4. Status reports of threatened, endangered, and extirpated species will be the basis for the development of species recovery plans.

Examples of Criteria for Changing Status of COSEWIC Species

	DOWNLISTING	UPLISTING
EXTIRPATED TO ENDANGERED	a. Species, subspecies, or population is successfully reproducing at the F_2 generation in free-ranging or fenced conditions. b. Survival of offspring to reproductive age is greater than mortality over that time period. c. Habitat essential to species' survival is adequately protected in the foreseeable future (30 years) through management or preservation. d. Population is stable, or increasing but numbers still very small. e. A backup source of breeding-age individuals is available in Canada (captive, cultivated, or wild individuals from another country).	a. No record for the last 3-5 years of individuals or populations or suitable habitat in spite of investigation.

Examples of Criteria for Changing Status of COSEWIC Species (Cont'd)

	DOWNLISTING	UPLISTING
ENDANGERED TO THREATENED	a. At least three populations separated spatially by some considerable distance. b. All sites are adequately protected and regulated areas. c. Most or all populations are showing significant increase with natural expansion of range occurring, or all existing habitat at site is occupied. d. Habitat, in addition to that currently occupied, is available for continued range expansion. e. Threat is still evident in part or most of species' former range in Canada. f. Captive or cultivated stock for wild release maintained if needed.	a. Very few native populations exist (perhaps three or less remaining, protected or not). Populations are declining drastically due to habitat loss, excessive harvest, natural catastrophes, environmental stresses, or other factors caused by man.
THREATENED TO RARE	a. Populations have recovered or increased to a point where extinction or extirpation is unlikely as long as currently available habitat is preserved or managed. b. All or most wild, free-ranging, or fenced populations are increasing or stable with no evidence of a downlisting for the last 3-5 years. c. Populations are sufficiently low so the species is uncommon within its range or confined to a small geographic area--otherwise, the species is delisted.	a. Several populations have decreased drastically in numbers; perhaps only one-half of those existing 5-10 years ago remain. b. Rapid decline in numbers caused by environmental factors, pollutants, or other detrimental factors caused by man. c. Factors causing decline are still evident.

Examples of Criteria for Changing Status of COSEWIC Species (Cont'd)

	DOWNLISTING	UPLISTING
RARE TO NOT IN ANY CATEGORY	a. Significant numerical increases in known population(s) found or established that substantially increase the number previously known on the area of its documented range. b. Population currently occupies most suitable habitat remaining in its former geographical range. c. A harvestable portion could be removed for subsistence, commercial, or recreational use, if such demands occur without seriously reducing the population size or affecting its potential for sustained growth.	

Appendix 4

DEFINITIONS OF CONSERVATION STATUS

SPECIES:	"Species" means any species, subspecies, or geographically separate population.
VULNERABLE SPECIES:	Any indigenous species of fauna or flora that is particularly at risk because of low or declining numbers, occurrence at the fringe of its range or in restricted areas, or for some other reason, but is not a threatened species.
THREATENED SPECIES:	Any indigenous species of fauna or flora that is likely to become endangered in Canada if the factors affecting its vulnerability do not become reversed.
ENDANGERED SPECIES:	Any indigenous species of fauna or flora that is threatened with imminent extinction or extirpation throughout all or a significant portion of its Canadian range, owing to human action.
EXTIRPATED SPECIES:	Any indigenous species of fauna or flora no longer existing in the wild in Canada, but occurring elsewhere.
EXTINCT SPECIES:	Any species of fauna or flora formerly indigenous to Canada, but no longer existing anywhere.

POLAR BEAR ADMINISTRATIVE COMMITTEE (PBAC)

Ian Stirling and Kevin Lloyd
Canadian Wildlife Service

The 1988 meeting was held on 14 June in Victoria. Kevin Lloyd was reelected for a second term of three years as Chairman.

A wide range of management and research problems was dealt with. Several items are of particular interest. The Northwest Territories is doing a major overview of polar bear management within its jurisdiction. Boundaries of zones will be changed to reflect research results in an effort to manage by subpopulation. It was agreed that as the management plan approached completion, negotiation would take place with adjacent jurisdictions over allocation of quotas for shared populations, using the guidelines completed by the PBAC in 1987. Newfoundland reopened its polar bear hunting season with a quota of four for Inuit in Labrador in 1988.

In January 1988, the Inuvialuit of Canada and the Inupiat of Alaska signed a users' management agreement for polar bears in the southern Beaufort Sea. This Agreement covers quotas, seasons, and protection for females with cubs and bears in dens. Although it has no basis in law, this agreement, if effective, will resolve a serious conservation problem that lacked a short-term solution and will represent one avenue for significant involvement of native people in wildlife management issues.

General concern was expressed about the status of the polar bears in southern Foxe Basin, northern Hudson Bay, and Hudson Strait. Current harvest levels are fairly high, but the data on population size and parameters are not available. It was agreed that a high priority is to get the Inuit user groups from the Northwest Territories, northern Quebec, and Labrador together to evaluate possible problems and discuss various solutions, including sharing the quota from this population of polar bears. The agreement between the Inuvialuit of Canada and the Inupiat of Alaska was cited as a possible model for this approach.

A recent population modelling workshop indicated that the total number of females harvested from a polar bear population could not exceed about 1.5% of the total number in that population. The greater the proportion of the kill that is made up of males, the larger the quota that can be safely taken. Quotas in all polar bear zones in Canada are currently under review.

Immediate deterrence of polar bears from the area of an oil spill was determined to be far more cost effective than building an expensive mobile facility with which to try to clean oiled bears. Thus, it was decided not to proceed with the Oil Spill Contingency Plan, although the information accumulated would be kept for reference.

Polar bear viewing has become an activity of major importance in northern Manitoba. There is potential for similar developments in other areas as well. Manitoba is taking the lead in developing guidelines to maximize safety and minimize harassment of the bears.

The IUCN (International Union for Conservation of Nature and Natural Resources) Polar Bear Specialists' Group will meet in Sochi, USSR, in late October 1988. Mitchell Taylor, Northwest Territories Wildlife Service, was chosen to represent the provinces and territories, and Ian Stirling, Canadian Wildlife Service, was chosen to represent the federal government.

The US Marine Mammal Protection Act is up for reauthorization this year. Restrictions on the importation of hides are unlikely to change, but importation of orphaned bears for zoos will likely become easier.

NATIONAL WILDLIFE WEEK

Ken Brynaert
Executive Vice-President
Canadian Wildlife Federation

1988 National Wildlife Week

The 1988 National Wildlife Week was a resounding success. Media coverage was outstanding. The level of co-operative efforts exceeded even our most optimistic expectations. Increasing efforts to reach more educators within some jurisdictions were very encouraging. We commend all participating agencies for an exceptional effort this year.

We were especially pleased that the Province of Saskatchewan rejoined the national program. We also commend Environment Canada for its increasing role in facilitating grassroots participation--both with its ongoing effort in Western Canada and the more recent initiative in the National Capital Region. We strongly urge that all regional Canadian Wildlife Service offices undertake a similar role in the year ahead.

This year, the Canadian Wildlife Federation launched an extensive Canada-wide media program, in which Environment Canada participated, which generated more media coverage than has ever been achieved in the history of this program. Our evaluation showed that public service announcements alone were aired over 2000 times, and extensive coverage was given to National Wildlife Week by over 25 television stations, more than 45 newspapers, and over 80 radio stations. And these were only the results from outlets we could measure and monitor. We conservatively estimate that the publicity value gained from our promotion alone exceeded the $250 000 range.

The use of National Wildlife Week as a powerful communication vehicle to reach the public is obvious. We're achieving important successes in the nationwide media sector; we're also collectively making tremendous progress in increasing the number of individuals, organizations, and institutions becoming active in promoting National Wildlife Week. At the grassroots level, in particular, localized participation is a vital link in stimulating public awareness and the thoughtful involvement of young people. The festivals and other public-oriented co-operative local events that occurred in some regions contributed in a major way toward making National Wildlife Week a meaningful experience. To encourage co-sponsors not currently involved in such programs, the Canadian Wildlife Federation is co-ordinating a summary of stimulating ideas and examples of activities that occurred in 1988.

This year, we distributed a total of 62 000 kits. We estimate that 45-50% of elementary school teachers received the kit, outside of Quebec. Next year, we would like to see the overall target audience significantly increased in both language categories. Keeping your budget constraints in mind, we are reviewing what percent increase of orders per jurisdiction would be required to produce more kits at similar bottom-line costs of previous years. The information will be distributed before September.

We noted that more jurisdictions are using the National Wildlife Week poster for promotional handouts to the public. In total, 22 000 were distributed this year. In addition, another 23 000 booklets donated by our printer were distributed. Next year, we will be encouraging greater use of these materials at festivals and exhibit programs.

Our overall 1988 evaluation results of teacher feedback indicated that the kit was very well received and well used. We were impressed with the exceptionally high percentage (90%) of educators who retain the kit for future use. We feel that as an investment, both in the short term (to highlight National Wildlife Week) and in the longer term (reuse of kit), the educational package is well worth the money expended.

As the national co-ordinating organization of the National Wildlife Week program, the Canadian Wildlife Federation remains committed to the principle of making the program effective and highly visible in the public eye. Given the success of National Wildlife Week '88 and the emerging swell of participatory efforts, we are convinced that the National Wildlife Week program is fast achieving a "major league" status in some parts of Canada already. We intend to continue to be vigorously involved and encourage greater levels of participation and promotional efforts in the year ahead, including public-oriented initiatives and educational programs.

1989 National Wildlife Week proposal and new initiatives

Next year will mark the 25th anniversary of the launching of a formal National Wildlife Week program. We have circulated a brief that describes an exciting way to celebrate this important event within schools. Very briefly, we propose to extend the 1987 theme, which emphasized habitat, to encourage more opportunities that motivate students to learn about wildlife through doing hands-on habitat projects. A "Wildlife Habitat Classroom Fund" established and administered by the Canadian Wildlife Federation would provide financial assistance for equipment and supplies. The fund would serve as an important motivator for educators to stimulate student participation. We have tested this concept already through our National Wildlife Week '88 evaluation. Preliminary results show overwhelming teacher support (over 80%), the majority of whom have indicated that they would participate if financial assistance were available. We encourage all co-sponsors to include high-school teachers in their target educational group this coming year. The 1989 proposed booklet--an instructional guide of easy-to-do project ideas--will be designed for a broad age range.

At the time of writing this report, some co-sponsors have already indicated strong support for this concept. We urge that this program be endorsed by the Federal-Provincial Wildlife Conference.

National Wildlife Week ambassador and Federal-Provincial Wildlife Conference National Wildlife Week award

Before moving on to the 1990 program, we would like to submit two further recommendations to commemorate the 25th anniversary of our program.

First, we recommend that this body approve the idea of inviting an appropriate, well-known, distinguished Canadian to serve as a "National Wildlife Week '89 Ambassador" to provide a personal, highly visible focus in promoting National Wildlife Week. If this approach works well, we would suggest that an annual ambassadorship be established.

Second, we request that an ongoing annual award that recognizes an outstanding contribution by an individual, organization, or agency to the National Wildlife Week program be established at, and be awarded through, this Conference. We would be willing to administer and co-ordinate such an award on the Conference's behalf.

We would ask that if these two ideas are approved, a small working group of interested Federal-Provincial Wildlife Conference members be struck to work with us in the selection of an ambassador and the duties that would be associated with the task, as well as developing the terms of reference and structure of the award program.

We feel that both initiatives would serve to enhance the overall program, complement existing efforts, and encourage greater participation.

1990 National Wildlife Week

Looking ahead, we request that a theme concept for 1990 be accepted and approved. We propose a "wildlife and forestry" theme that would emphasize integrated management and wildlife associated with different forest regions. Over the past years, many of the themes have been general. A "specific topic" approach would allow greater detailed treatment of a subject area and is more focussed and thus easier to handle for promotional purposes. Keeping in mind as well that teachers are retaining serialized units, we must ensure that fresh, new, and specific material is presented that extends our overall program. Furthermore, we can use the 1989 kit to announce the 1990 theme, thus providing advance information for curriculum planning.

If our proposal is accepted, we would approach the forestry associations to complement their Week with a wildlife dimension and perhaps co-operate in some areas of mutual interest.

Report from Canadian Wildlife Directors' meeting on recommendations

Jim Walker
Chairman
1988 Federal/Provincial Wildlife Conference

This year, we handled the recommendations in a different manner than at previous conferences. The first morning of the Canadian Wildlife Directors' meeting, which preceded this Conference by two days, was set aside to accept written or verbal recommendations from a variety of non-government organizations from across the country. The list of recommendations that was received and reviewed is available in a report entitled "Resolutions Presented to the Canadian Wildlife Directors, 12 June 1988, Victoria, BC" (Appendix A).

The directors wish to thank the various organizations and individuals who took the time to put recommendations forward. The disposition of the recommendations was as follows:

(1) There were four sets of recommendations generally in support of a strong government stance in favour of trapping. These were presented by the Fur Institute of Canada, the Ontario Trappers' Association, the BC Trappers' Association, and the Wildlife Conservation and Fur Marketing Federation. There were also two sets of recommendations in support of stronger standards for humane trapping, submitted by the Fur Institute of Canada and by the Canadian Association for Humane Trapping and the Humane Trapping Committee of the Canadian Federation of Humane Societies.

These recommendations will be submitted by the Canadian Wildlife Directors along with a letter of support for both sets of recommendations to an upcoming meeting of the Wildlife Ministers.

(2) There was one recommendation by the Friends of Ecological Reserves, calling for the protection of more than one significant, intact, west coast watershed, including a pristine estuary for the protection of salmon, old-growth forest, and grizzly bears.

It is the intention of the Canadian Wildlife Directors to circulate this recommendation widely to make people aware of this important issue.

(3) There was one recommendation from Wildlife Habitat Canada, calling for Wildlife Directors to ensure that future wildlife-related agreements with forestry interests should reflect the "National Forest Sector Strategy."

The Directors accept this recommendation and will do their utmost in each jurisdiction to implement the spirit of it.

(4) There were four recommendations from the Canadian Wildlife Federation, respecting next year's National Wildlife Week. These were as follows:

- That the "Wildlife Habitat Classroom Fund" be accepted as the concept for National Wildlife Week for 1989.

  The Directors accepted this, with the qualification that different wording be found that would better reflect the fact that this concept encourages students to undertake wildlife projects supported by the said fund and that the emphasis was on "hands-on" wildlife projects.

- That an appropriate person be invited to serve as National Wildlife Week Ambassador, to further enhance the profile of Wildlife Week.

  The Directors accepted this recommendation, with the qualification that the most useful model may be to have one ambassador in each province or territory.

- That a small working group be appointed to develop terms of reference for this ambassador and to work on the concept of a National Wildlife Week award program.

  The Directors selected a small committee consisting of representatives from the Canadian Wildlife Service, Ontario, and Quebec to work on the concept of an ambassador and terms of reference for him/her in each province.

  The Directors rejected the concept of an award program for National Wildlife Week, feeling that there were sufficient such award programs at present and that National Wildlife Week is extremely successful as it is, without further embellishments.

- That the concept of "Wildlife and Forestry" be accepted as the 1990 National Wildlife Week theme.

  After consultation with Mr. Brynaert of the Canadian Wildlife Federation, the Directors concurred that the theme of "Wildlife and Sustainable Development" was an appropriate one to consider for 1990.

Again, the Canadian Wildlife Directors would like to thank all those organizations who took the time to make their views known through providing these recommendations. At next year's conference, we hope to be able to improve the recommendations process even further, to make it a more meaningful part of the proceedings, and to ensure that the recommendations that are accepted are given maximum exposure and usefulness and that all the public groups who want can avail themselves of the process to make recommendations to the Canadian Wildlife Directors.

Appendix A

RESOLUTIONS PRESENTED TO CANADIAN WILDLIFE DIRECTORS, 12 JUNE 1988, VICTORIA, BC

Fur Institute of Canada

Trapping recommendations

It is recommended that the Conference support the following recommended minimum trapping regulations and minimum trapper education course standards to be adopted on a standardized basis in each province or territory with a recommended implementation date prior to 1 October 1989:

(a) Recommended minimum trapping regulations

1. Prohibit the use of traps with metal teeth or metal serrated edges.
2. Prohibit the use of hooks or sharp devices for the purpose of harvesting furbearers.
3. Require all manually operated neck snares that are on land to be equipped with a locking device or set in such a manner that the noose is prevented from expanding (except for snares made from copper or brass for the purpose of harvesting red squirrel and rabbit).
4. Require all foot-hold traps for aquatic species (beaver, muskrat, otter, and mink) to be set in such a manner as to allow the animal to submerge, and preventing it from resurfacing.
5. Require all terrestrial furbearers except fox, coyote, wolf, lynx, bobcat, and black bear to be harvested only with the use of quick-kill traps, box or cage traps, or traps set in such a manner as to kill the animal quickly.
6. Restrict the use of foot-holding devices set on land to fox, coyote, wolf, lynx, bobcat, and black bear (except cage or box traps).
7. Require all live-holding devices set on land to be checked at least daily.
8. Prohibit the use of poison for the purpose of harvesting furbearers.
9. Require all first-time trappers to successfully complete a basic course in trappers' education with an emphasis on humane trapping techniques, pelt preparation, and furbearer management.
10. Prohibit the use of spring poles with foot-hold traps in trees or on poles except where the trap is set as a killing trap set.

11. Prohibit the use of steel-jawed leg-hold traps for the purpose of harvesting black bears.

12. Permit the use of padded leg-hold traps for species other than those listed in No. 6 if research concludes that their use for such purposes is humane.

(b) Minimum trapper education course standards

1. Promote respect for animals, respect for people, and respect for the environment.

2. Promote a basic mandatory course for all first-time trappers comprised of one-third furbearer management, one-third humane capturing systems, and one-third pelt preparation, to include a written test, practical test, and at least 80% attendance at the program. The course should be a minimum of 30 hours.

3. Promote compliance with trapper responsibilities established by the FIC National Instructors Workshop, 1988.

4. Emphasize humane concepts when teaching trapping systems.

5. Promote the use of soft-catch or padded-jaw traps where foot-hold traps are used on land as live-holding devices.

6. Promote the use of trapping systems in populated areas that are compatible with and safe for people and pets.

7. Promote the use of quick-killing traps.

8. Update existing trapper education materials to incorporate the most humane systems and techniques.

9. Promote continuing trapper education programs.

Schedule "A"--FIC trapper education promotional recommendations

We recommend the promotion of the following through education programs:

1. Promote the use of soft-catch or padded-jaw traps where foot-hold traps are used on land as live-holding devices.

2. Attempt to check all live-holding devices every day.

3. Recommend the use of two springs on the Conibears 110 or similar body-gripping trap except when set for muskrat, or the trap is set for mink in a manner that the animal will be submerged upon springing the trap.

4. Promote the use of trapping systems in populated areas that are compatible with and safe for people and pets.

5. Promote the use of quick-killing traps for beaver, muskrat, otter, and mink.

6. Promote continuing trapper education programs.

Schedule "B"--Responsibilities

1. There shall be no teeth on traps, or serrations, hooks, or sharp edges.

2. Only quick-kill devices shall be used to harvest on land raccoon, marten, fisher, squirrel, weasel, skunk, wolverine, mink, muskrat, opossum, and badger.

3. Holding traps, when attached to a solid anchor, shall have no more than 12 inches of free play on the chain and central attachment (except for timber wolves, 24 inches).

4. A slide lock/device shall be used on all holding traps set with a slide wire from land to deep water.

5. Snares set on land must be equipped with sufficient locking devices (exceptions for squirrel and rabbit).

6. Leg-hold traps shall not be used as holding traps in trees, on running poles, or with a spring pole.

7. Only leg snares and cage traps or shooting shall be used for the taking of bear.

8. Live-holding devices shall be checked daily.

9. Proper use of carcasses and pelts of all harvested furbearers.

10. Report any sign of abnormal behaviour or disease in animals to the proper authorities.

11. Teach trappers proper conservation and harvesting methods. Support trappers' associations and trapper education programs.

12. Report violators.

13. All capture devices should be maintained in a mechanically fit condition.

14. Only licensed trappers and legally authorized personnel will be allowed to set capture devices.

Schedule "C"--CFHS/CAHT additional improvements

(a) Amendments

CFHS and CAHT suggest the following amended improvements to FIC's recommended minimum trapping regulations, with reference to FIC's specific item numbers:

3. Require all snares to have a locking device, including snares for rabbit and red squirrel.

5. Delete bobcat, lynx, and Arctic fox from the list of exceptions and require them to be taken in quick-killing traps.

6. Only soft-catch traps or approved humane traps should be permitted for fox, coyote, and wolf.

7. All traps should be inspected daily.

9. A "basic" trapper education course should be interpreted as being comprehensive, of at least 30 hours' duration, with 80% attendance and an exam. Existing trappers should attend in-depth trapper education seminars periodically and should be required to pass a challenge practical or written test by 1 October 1990.

10. No. 10 should be interpreted to prevent any method of suspending a live animal above ground.

(b) Additional improvements

The following additional matters should be regulated by your province:

1. Dead-falls should be prohibited.

2. Only licensed trappers should be permitted to trap furbearing or nuisance animals, with the exception of a property owner using mouse or rat traps on his property.

3. Humane devices should be mandatory for the capture of nuisance wildlife, including smaller mammals not designated as furbearers.

4. All traps should be maintained in a mechanically fit condition.

5. All trap chains on solidly secured live-holding traps used on land should be equipped with a shock-absorbing device, should be less than 12 inches long, and should be connected to a central pivot on the bottom of the trap in order to cushion and reduce damage from lunging.

6. The Conibear 110 trap and Northwood 100 trap should be modified to become two-spring traps.

7. Various traps should be prohibited, including stop-loss traps, old steel-jawed bear traps, #0 and #1 long-spring traps, old-style Conibear traps, steel-jawed leg-hold traps, old snare wire, standard foot snares, and homemade traps.

8. Only licensed trappers should be permitted to purchase traps. Traps should be sold only from authorized outlets.

9. No traps other than an approved live-holding box-type trap should be used within 400 metres of a residence. Such box traps should be tended at least once each 12 hours and preferably more frequently.

10. Each provincial government should establish quotas and seasons for the trapping of all fur-bearing species, including those not now regulated, based upon biologically sound population studies.

11. Trap exchange or trap modification programs should be established to replace inhumane traps with approved quick-killing traps or humane holding devices.

Ontario Trappers' Association

Resolutions

1. That management and conservation must be the factors governing the consumptive use of wildlife populations, based on sound biological facts rather than emotion.

2. That the rights and protection of traditional harvesters of wildlife populations must be seriously recognized and considered when policies or regulations are enacted that might affect traditional livelihoods.

3. That a closer working relationship should be encouraged to exist between opposing consumptive and non-consumptive groups.

4. That consumptive groups, such as hunters and trappers, should be financially assisted in order that they might better convey their public message.

5. That there is no need to drastically stray from the current Guidelines for a Wildlife Policy in Canada, as these guidelines are based on sound management principles.

BC Trappers' Association

General recommendations

1. That wildlife management policies emphasize controlled use of the resource by all interested segments of society, both consumptive and non-consumptive, while seeking to achieve the maximum carrying capacity of the habitat for the greatest number of species.

2. That definite policies be implemented to communicate to the public the legitimacy and wisdom of that concept.

3. That massive, immediate effort be applied, through public information and education, through unification of the many wildlife users, through documentation of the real economic values of the wildlife resource, to halt the runaway abuse and exploitation of our environment by the chemical industry, by the forest industry, by land development under token restraints, and by the mining, oil, and gas industries when they are allowed to preempt all other values.

Specific recommendations

1. That there be a major increase in support staff and funding to all wildlife management agencies.

2. That there be made available more non-consumptive wildlife opportunities.

3. That there be an increased emphasis on evaluating and improving the technical basis for management guidelines.

4. That tighter restrictions on the use of wildlife be utilized (and consequently tighter enforcement) in order to realize management objectives.

5. That far more severe punishment be delivered to offenders.

Wildlife Conservation and Fur Marketing Federation

Resolutions

1. That there is no need to make any drastic changes to the current Guidelines for a Wildlife Policy in Canada, as this document recognizes that the responsible management of renewable resources is critical to the future of Canadian industry, Canadian people, and Canadian resources.

2. That increased funding and staff energies be applied to communicate to the general public the importance and need for continued wildlife management.

3. That serious consideration be directed toward developing a national co-ordination of fur management systems, lwith an emphasis on increased regular communications between all provincial and territorial agencies, with respect to regulations and controls relative to consumptive use and orderly marketing of our Canadian wild fur resources.

Friends of Ecological Reserves

Resolution

Whereas:

1. The aim of wildlife management should be to maintain species diversity and the richness and diversity of wildlife habitat.
    - Protection of significant wildlife and wildlife habitat in Canada is a matter of international concern.
    - Regional differences reflect that the full diversity of species is threatened.

2. BC coastal old-growth forests represent critical habitat for many wildlife species, including grizzly bear, Bald Eagle, Marbled Murrelet, and other wildlife.
   - Second-growth forests are poor habitat for many wildlife species and lack genetic diversity.

3. All major coastal valleys in British Columbia, with any timber values, are either logged or scheduled to be logged in the next 10-15 years.
   - Significant Sitka spruce forests are found primarily in the alluvial floodplain on the BC coast, in inlets, river valleys, and estuaries.
   - After logging, in unstable river valleys, there is poor regeneration of Sitka spruce.

4. Today, Sitka spruce forests represent less than 2% of all remaining coastal old growth.

5. Prime grizzly bear habitat is in old-growth, alluvial Sitka spruce forests beside salmon rivers.

6. Estuaries are also significant wildlife and grizzly bear habitat in conjunction with important salmon rivers.
   - Estuaries and wetlands are among the most threatened ecosystems in coastal British Columbia.

7. Few coastal watersheds remain that combine significant alluvial Sitka spruce, important salmon river, large intact estuary, and a high population of grizzlies and other wildlife.
   - This natural coastal forest system and its critical wildlife habitat must be considered an endangered ecosystem.

Therefore be it resolved that the Federal/Provincial Wildlife Conference 1988 strongly support:

Protection in its pristine state of more than one significant, complete, intact, coastal BC watershed of a minimum of 40 000 hectares, to protect a large pristine estuary, significant old-growth alluvial forest of Sitka spruce, important salmon river, diverse wildlife, and large population of grizzlies.

Wildlife Habitat Canada

WHEREAS the Council of Forest Ministers endorsed the National Forest Sector Strategy in 1987 that specifically encouraged the integration of wildlife habitat objectives into forest management programs;

WHEREAS there have been a variety of pilot projects and public forums that have demonstrated the enthusiasm of all sectors to accomplish this integration; and,

WHEREAS the majority of Federal-Provincial Forestry Agreements are currently being renegotiated;

BE IT RECOMMENDED that the Wildlife Directors actively encourage their forestry colleagues to ensure that future agreements reflect the National Forest Sector Strategy recommendation dealing with the integration of wildlife.

Canadian Wildlife Federation

Summary of National Wildlife Week recommendations

It is recommended that the "Wildlife Habitat Classroom Fund" proposal submitted by the Canadian Wildlife Federation be accepted as the 1989 theme concept for National Wildlife Week.

It is recommended that the Federal-Provincial Wildlife Conference endorse the concept of inviting an appropriate, well-known, distinguished Canadian to serve as a National Wildlife Week '89 Ambassador.

It is recommended that the Federal-Provincial Wildlife Conference establish an annual National Wildlife Week award that recognizes an outstanding contribution by an individual, organization, or agency; it is further recommended that the award be sponsored by and presented through the Conference.

It is recommended that a small working group of Federal-Provincial Wildlife Conference members be struck to work with the Canadian Wildlife Federation to select a National Wildlife Week Ambassador; determine what duties would be associated with the ambassadorship; and develop the terms of reference and structure of a National Wildlife Week Federal-Provincial Wildlife Conference award program.

It is recommended that the concept of "wildlife and forestry" be accepted as the 1990 National Wildlife Week theme.

Conference wrap-up

Andrew Thompson
Associate Counsel
Ferguson Gifford Barristers and Solicitors

I am going to try to sum up all of the things that have come out of this Conference. I think that I should start by saying something about my own experience and background so that you can relate that to what I am going to say and so that you will be able to detect when it is my prejudices and preferences that are coming through rather than a reporting of what has gone on at the Conference.

I have been a university professor much of my life. I worked for government for a number of years. I was Chairman of the Canadian Arctic Resources Committee for eight years back in the 1970s and so have familiarity with working with non-governmental organizations (NGOs). For eight years at the University, I was Director of the West Water Research Centre, an interdisciplinary body with the responsibility to deal with policy in institutional matters in relation to natural resource systems. So I am a generalist and have a background of that nature.

Agency-NGO relationship

I want to start with some comments about the agency-NGO relationship that is being seen at this meeting. I understand that this is the first meeting at which NGOs have had a full role to play. In the NGOs' minds and also on the side of the agencies, there must be some soul searching about that role. Is this going to work? A more traditional role in Canada is for the agency to be on one side and the NGOs on the other, and the NGOs express themselves as critics and put the pressure on the agencies. Here we see a co-operative effort. I think it is certainly worthwhile. It is the sort of thing that should be tried because if the NGOs can feel that they are having an effective voice in influencing government, then I think that is probably a role they want to play.

Revision of Guidelines for a Wildlife Policy in Canada

We have a document before this Conference that is very much a bureaucrat's document. It starts with a statement of goals and a statement of principles and then lays out a sort of smorgasbord of actions or a wish list, as somebody described it. There is not much that you can take exception to in terms of the ideas and values and sentiments being expressed there, but it is not an activist-type document. Groups 1 and 2 both saw that the revision of this statement should elevate it to the status not just of a guideline but of a policy, that it ought to be adopted not just by wildlife branches but by governments as a whole, and that its influence ought then to pervade not just the actions of a wildlife agency but the actions of all resource departments, and it should be reflected in the kind of legislation or mandates that are provided to the various agencies of government. I think I can charge the people who have that job of revising the guidelines that if you don't produce the kind of a document that shows, as someone put it, a more aggressive stance in this respect, you are going to lose the support of the NGOs, and instead of them being here working with you to produce that document, they are going to be over there at the side shooting at you, and that's not the kind of fruitful relationship that I think is possible.

Goals

When I look at the World Conservation Strategy, the recent Brundtland Report, and page 6 of the Guidelines, the goals are identical. There is just no dispute about goals. The first one has to do with ecosystem maintenance, the habitat, the land base as somebody referred to it. The second one is preservation of genetic diversity; that's a concern for the wildlife itself. Finally, in each of these documents there is a reference to the need to somehow or other balance use with sustainability. So those are three goals that seem to unite us all--the habitat, the wildlife, and accommodating use to sustainability. So I wonder, with such unanimity about goals, why such diversity from then on about what you are supposed to do to achieve them?

I think that we should get semantic elements out of the way. We heard a great deal here about the counterproductiveness of putting labels on things that carry with them senses of infamy or inferiority or whatever. We see those in terms of reference to "intensive management" as being artificial in some way, and reference to "consumptive" versus "non-consumptive" uses. I know that, as a lawyer, when you get down to producing documents that are going to be operative as policy or legislation, you have to get precise about definitions. But I don't think we want to get hung up, at this stage, with a lot of these labels, and so we should leave them behind.

Value systems

What we were told by Monte Hummel, and what was shown to us by Ian McKinnon of Decima, was a pretty good insight into where value systems are today for Canadians. These value systems, of course, shape our expectations and our wants. They are not going to be the same for everyone, and, not only that, they are going to be changing. Obviously, there is great public support for the environment, and this can be translated into support for our wildlife goals. Not only is it our perception of ourselves, but I think it is a perception of how we think other people perceive us to be. Canada has an image outside of this country as being a place where the environment is special, where wilderness is special, where wildlife is special.

We were asked to think about where this would take us, and we were reminded of demographic trends, one of which was a reference to the role of women in relation to the enjoyment of wildlife. Another one demonstrated the demographic change in terms of immigration and showed the increasing numbers of Oriental people. The implication was clear that they have different value systems. My daughter has close friends who are second- and third-generation Chinese people who are very much within the stream of our society, the society of their contemporaries. They sense that in Canada there is a special meaning attached to wildlife and to wilderness, and they want to try to understand. They have gone out with my daughter on camping trips in the woods, and they sort of grappled with the notion of just what this experience of being Canadian is that somehow or other we should share, we want to share, and what does it mean for us? I think that those who come to this country do absorb our values, but that doesn't mean that they leave their own behind.

Out of this flux has to come a new set of values, and that really worries us all. The agencies have been charged with being rooted back in time 10 or 15 or 25 years ago and not keeping up with these trends. On the other hand, you can detect in the NGOs, in the emphasis that's placed on preservation, this sense that we don't want change, we want things to be the way they have always been. So although the rate of change seems to be increasing, this seems to generate in us more and more a desire for stability.

Aboriginal rights

I want to refer at this point to what is, to my mind, a very overlooked element. It has been identified within the groups in terms of values. In this country, we have a population that has significantly different values from ours with respect to wildlife and wilderness, and I am referring to aboriginal people. Value systems don't operate in a vacuum. They produce our institutions and our laws, and values, in turn, are influenced by those laws. It so happens that in this country we have placed in the constitution an affirmation of aboriginal rights. We are beginning to give definition to those rights in land claim settlements in the North, in treaty revisions before the courts. I've been Chairman of a Special Committee on Native Justice for the Canadian Bar Association. We were given sufficient funding to get well-researched documents into basic issues--aboriginal rights, entitlement, self-government, the standing and the status of treaties today. We are at the stage now where we are putting it all together into a book report. I just want to state, as a personal view, that we are just beginning to have an awareness of what implication this will have with respect to wildlife and wilderness management. Running throughout the threads of complaint, whether they be aboriginal title claims, or claims about violation of treaties, or claims about misinterpretation of what treaties meant, is the central theme of the use of wildlife, the protection of wildlife. And that is leading, as we are seeing in the northern settlements, to the assertion of the right by aborigines to at least co-manage the wildlife resources.

To give you an illustration of what I am talking about, I will refer to some recent court cases. The British Columbia Court of Appeal unanimously, in the "Sparrow Case," upheld the existence of aboriginal rights to fish, in this case, in the estuary of the Fraser River, and off a reserve. This wasn't the case of reserve rights at all, but of a general aboriginal right to fish in the estuary of the Fraser River. This, then, is an entrenched right within Section 35 of the Constitution, which affirms existing aboriginal rights. The court, in giving shape to how this aboriginal right exists, said that it was subject to regulation, certainly in terms of conservation.

But how is this being applied? A recent decision by a Provincial Court judge from the Queen Charlotte Islands acquitted a Haida Indian on a charge of fishing for coho salmon out of season in one of the streams on the Queen Charlotte Islands on the basis that it was completely consistent with this Court of Appeal decision. The evidence before that Provincial Court judge convinced him that the rule in question, which was the closing of this river at that time, was not a rule that had any conservation component to it. It was a rule that had been designed by Fisheries and Oceans to accomplish allocation of the stock between the sports fishermen and the commercial fishermen. Now this finding was after examination of experts who explained the purposes and the objectives of the regulation system.

What this means is that the kinds of regulation that wildlife agencies or fisheries agencies apply, where there are aboriginal rights that can be established, are going to be modified because they are going to have to stand up to the test of whether or not they represent a genuine conservation value or, on the other hand, the accomplishment of some other kind of goal that our society, or our experts in the agencies, think should be there. What does this lead to? This has to lead to co-management-type situations with respect to at least certain of the fisheries.

The northern agreements that are being made with the Inuvialuit are establishing joint, equally representative, native/government agencies that will deal with such things as the allocation of the harvest. That is something that we need to be alert to and sensitive to, because it's the law of our land, and its influence is going to be pervasive.

Animal rights vs. trapping and subsistence use

We saw in this Conference conflicts in our value systems: animal rights versus trapping and subsistence use. We heard very good and strong presentations on both sides of that argument. I thought there was probably a missing element. It's true that so far as native people and trapping are concerned, trapping is a learned behaviour--that is, the white man brought the fur industry to North America. You won't get unanimous support for the role that native people play in trapping. Some Indian leaders or native leaders consider that it is demeaning. However one sees this, and this applies beyond aboriginal people, there is an impact from regulation to prevent the marketing of furs. It may be an impact to an individual, it may be an impact to a community, it can be the loss, as Mr. Moses told us, of the livelihood, of the cash economy, for a native community.

However this is resolved, it is also part of our value system that we don't impose those losses on sectors of our population without ensuring that, first of all, the injuries are mitigated as far as possible, and, secondly, that they are compensated for. There has been development in Canadian law, in just the last year or so, so that a miner who is displaced from a park, by reason of regulations that now make mining activity improper, is, under the decision of our Supreme Court, entitled to be compensated for the loss of the right to mine. I mention that as a factor that I think we have to take into account, because I think it's part of our value system that we do not simply impose on society new changes, new regulations that are in contravention of their acknowledged rights, without making compensation.

Preferences

Our value systems, as I have said, translate into our goals and our preferences. We have talked about goals; let's talk about some of these preferences. We see a clear shift away from the hunting of animals towards more general recreation; tourism has been around a long time, the desire to tour through the wilderness and to see animals. Banff National Park was established in the last century. We must recognize that there are many preferences out of value systems that we share; people do have different things they want to do. Just take hunting itself--we tend to wrap it all up together, but, in fact, there is subsistence hunting, there is trophy hunting, and there is hinterland or community hunting (by that I mean the person who lives close to the wilderness and who is able to go out during the hunting season and shoot moose or elk or deer, which forms a part of his diet for a while). So within what we wrap up together as the consumptive use, the hunting use, we have to see that there are differences in preferences, and that these have different implications for us in terms of our reactions, our attitudes, and our management responsibilities.

Take the general recreation side of things. We seem to be having a tremendous increase in the number of people who are moved about on tour buses, or by train, and who take trips to Whitehorse or Alaska or throughout British Columbia. For them it has got to be an experience that is tremendously important, and yet it is a very different experience from that of the non-consumptive user, who takes off backpacking in the mountains or goes on a canoe trip in the Yukon.

What I am getting at here is that I resist a notion to want to focus in on one or two or three different types of preferences and say those are the good ones and these are the bad ones. I think we need to recognize that there are a whole lot of us here, and we have our differences in terms of what we enjoy, what we want, what are our preferences. If you are going to foreclose the exercise of those preferences, you have got to have some pretty good reasons for doing it, and you have to think about what the implications are for our society. From a management perspective, I think that it is the quality of experience that is the important thing to achieve, whether that be in terms of those persons who are travelling on a bus along the Alaska Highway to view wildlife and wilderness, or a sports hunter, or a person who is on a rafting expedition hoping to see wildlife. Next to providing this quality experience, there has to be, within management, a "priorizing," because there have to be choices made. There has been a reference to that in the call for socio-economic evaluation, an effort to try to get some quantitative basis for making some of these choices.

Management strategies

There has been a lot of discussion about management strategies. The choices seem to be between continuing an approach that is one of integrated management where the wildlife agencies sit down with the foresters and the mining industry representatives and, through planing and program development, attempt to have the wildlife concerns taken account of, and introduced into, the management programs of the other agencies.

The obvious concern running through this group is that wildlife has drawn a pretty poor hand in terms of that process, that it has little in the way of clout and in effect is urging, as a matter of moral persuasion, that the forestry people take account of wildlife values. What are the alternatives? There seemed to be a thread that ran through all of the groups, and throughout this Conference, that habitat protection and allocation are the key areas, a land-based emphasis, that if somehow or other wildlife management could get its hands on some aspect of land allocation, land use, some form of tenure, some way of dealing with the habitat, then it would be in a much stronger position when it came to sitting down with the foresters and the mining industry representatives. I have made a list of the people who identified habitat and habitat protection as the number one issue: Hummel, Fox, O'Sullivan, Peterson, Bunnell, Edwards, and group 2 or group 3 (I have forgotten which). Maybe it is significant that most of these speakers are from the NGO side of things, but maybe it simply reflects that government agencies, knowing and being respectful of mandates, are a little less aggressive when talking about trying to get power to move more strongly into the kind of game that is being played. The NGOs, though, certainly think that if wildlife management is to thrive there has got to be a better hand at the table when it comes to integrated and co-operative management.

There is a lot of soul searching about management and what the strategies ought to be. More of the same does not seem to be indicated. Instead, more for non-hunting uses seems to be in order, capitalizing on the public support for environment that we have been told about. One comment that caught my attention was an explanation of why budgets haven't shifted too readily in favour of the more general recreational, so-called non-consumptive uses. The statement was that the problem was the amorphous nature of these other uses and the difficulty, therefore, of identifying what could be an appropriate program or goal for the expenditure of money. It has just occurred to me that a challenge for wildlife managers that comes out of this Conference is to study how you would spend your money. What would you do with your money if two things occurred--if suddenly your budgets were doubled, or if you were determined to try to respond to the change in the value system that's been shown to us?

Implementation

Many of the groups identified a missing element from the guidelines, and that was any real attempt to address the question of implementation. How are you going to make those recommended actions work? This ties in with the expressed concern over trying to protect the habitat, because I think it was seen that that was probably the prime place to begin to implement the goals, the principles, the recommended actions of that document. There was discussion about ways in which you could improve the bargaining position of the wildlife agencies.

As a lawyer, something like implementation is a thing that comes to my mind first, because that is when I am brought into the act. Other people develop their goals and their preferences and what they need to have done, and then they come to a lawyer and ask, "How do we get it done, what do we do?"

So I want to give you a few comments of my own about how you could draw a better hand. There are two ways that I know of. One is to use the approach of the federal department of Fisheries and Oceans. It has a statute that makes it an offence, punishable by fine and imprisonment, to harmfully alter or affect the habitat for fish. Don't forget that the Fisheries Act is applied across Canada, that habitat is provincial habitat, so what Fisheries and Oceans is doing is moving into the control of provincial lands under the leverage of this offence provision. It's quite simple. The developer is told that unless he presents his plans to Fisheries and Oceans and has them reviewed and revised to meet the requirements laid down for protection of the fishery, then he can't be assured that the provisions of the Fisheries Act will not be used to prosecute him. So one approach is quite simple, and that is that there be legislation that makes it an offence, punishable by substantial fine and/or imprisonment, to damage or interfere with the habitat of wildlife.

We are doing a study for the Yukon on what kind of a policy and legislation you could put together for the protection of wildlife habitat. Our first recommendation is to introduce an offence provision and then, over time, to develop a policy as to how that provision would be used. There would then be a tool, in terms of all of the Yukon's wildlife populations, for dealing with other agencies and with developers to enhance the protection of wildlife habitat.

The second approach is one that would harness the abilities of the habitat people, the biologists, to be able to identify areas that are more critical for one reason or another to wildlife, and to have in legislation a means whereby areas can be designated as wildlife protection areas. Being so designated, there then could be applied to them the kind of operating regime that is necessary if you are going to try to make uses as compatible with the wildlife goal as possible. This is a project that is being supported by Wildlife Habitat Canada, because I think that they see, right across the country, that there are many situations where what is needed is some way to mobilize the resources of the wildlife branches and to bring them to bear when a specific situation arises.

We identified three types of situations. One is where, having carried out a systematic program of inventorying wildlife, inventorying the kinds of activities that we believe are likely to impact on it--i.e., this is an area that is likely to be subject to mining entry for exploration purposes, this is an area where they are likely to be increasing applications for grazing leases--you then "priorize" your protection area needs and set about, in a deliberate way, to make proposals for wildlife protection areas under the legislation. Each proposal would have to go forward well documented, well supported; the Minister would have to carry it through in Cabinet. But with the designation of a protected area, you would then have the power to deal with activities that threaten the wildlife habitat.

Now a second, and very common, type of situation is one in which you are forced, in a responsive way, to deal with a particular area--for example, an area that is prime territory for sheep. All of a sudden, some geologist believes that this is just the place to begin a mineral exploration program, and all of a sudden you are faced, as a wildlife agency, with the fact that in three or four or six months' time there is going to be a road built and extensive exploration activities will occur in the prime area for sheep. You need to be able to respond to that kind of situation. So the ability to designate an area for wildlife habitat protection is a tool for that purpose.

The third kind of situation is one in which an emergency occurs. Something can just get out of hand, whether it's a spill of toxics or some other type of situation. Emergencies arise, and an agency needs power to deal with that sort of situation.

The message I wish to leave here is that the problem is not a problem of capacity to do something. It is not really difficult to define "hows" in terms of options you have, so these things can be done. The problem is one of political will, because if you are going to produce the kind of legislation that gives you a strong hand to play when you are dealing with other agencies, then of course you have to be able to muster the political support to get it through.

Conclusions

What do I see to be the overall message out of this Conference for the agencies and for the NGOs? First, what is this Conference saying to the wildlife managers? I think it is clearly saying that there is a huge pool of public support out there if you can gain the attention of the public. We heard a lot about how the guidelines should be used. You must convince the public that the programs that you are able to deliver and want to deliver are genuinely part of our national identity as an environmentally conscious nation. Certainly, this is not a time to be less aggressive, not a time to stand with the status quo, but a time to start to take the initiative. In terms of budgets, that means asking for more money. I know it's not that simple, but it does mean that you start to think in terms of mustering that public support and building the kind of case that makes it more difficult for your Minister, or for whoever else is going to be reviewing budgets, to turn you down. You have to have a more aggressive stance against other users, uncomfortable though that may be, because there is a public out there to back you. I think there is a willingness on your part to want to take advantage of that!

The support of the NGOs is needed. They are in a unique position to muster that public support, to give it definition, and to organize it. I think that if this is going to prosper, the NGOs are going to have to become a little more co-ordinated. There are quite different emphases among the different groups, and those emphases, I think, have to be put aside if the NGOs are to be as effective as possible in terms of tapping this public support and throwing it behind the work of the agencies.

Val Geist, in his paper, reminded us of the great achievements that have been made through conservation efforts, through the efforts of the wildlife agencies. When you think of the enormous change in values and perceptions that has come about since the 1950s, when I first became interested, certainly one can be optimistic. One should then feel that this is a time more than ever to put our strengths, our resources, our talents behind wildlife preservation and behind all the ways in which we enjoy the wilderness.

Invitation to 53rd Federal-Provincial Wildlife Conference

Dave Pike
Director
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It is my pleasure to invite all of you here, and others as well, to the 53rd Federal-Provincial Wildlife Conference, which will be held in St. John's, Newfoundland, from 20 to 23 June 1989. We plan to hold the Conference in the Radisson Convention Centre, which is located in downtown St. John's, very close to a number of interesting little pubs that will provide nighttime entertainment as well as lunch for those of you who are so inclined.

We haven't yet started planning the details of the companion and field-day activities. We have some ideas in mind that I'm sure you will find enjoyable. Jim Walker and his host committee have given us a hard act to follow, but we are going to do our best to exceed the good time that has been provided to us here in British Columbia. I take this opportunity, Jim, to thank you and the host committee for a job well done.

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